

***The times they are a-changing - Identification and intergroup
relations throughout a merger: A longitudinal field study***

Dissertation
zur Erlangung des akademischen Grads

doctor philosophiae (Dr. Phil.)

Vorgelegt dem Rat der Fakultät für Sozial- und Verhaltenswissenschaften
der Friedrich-Schiller-Universität Jena
von Dipl.-Psych. Ilka Helene Gleibs
geboren am 14.03.1978 in Aurich (Ostfriesland)

Gutachter

1. Prof. A. Mummendey

2. Prof. P. Noack

Tag des Kolloquiums: 06.09.2007

Acknowledgement

*Denken und danken sind verwandte Wörter;
wir danken dem Leben, in dem wir es bedenken.*

Thomas Mann

I am grateful to my supervisors Amélie Mummendey and Peter Noack for their trust in my work, their support, and the possibility to work at the University of Jena.

I really appreciate that I had the opportunity to become an ingroup member of the “International Graduate College”. I wish to give my gratitude to everybody who is (or was) involved: Jörg and Muriel, all fellows, and postdocs in Jena, but also at the University of Sussex, University of Kent, and the Université Catholique de Louvain. I would not have made it without you. And would I like to thank the German Research Foundation (DFG) for financial support throughout the last years.

I additionally would like to thank the Department of Social Psychology at the University of Jena and all the affiliated research groups for the constructive environment, great talks, and discussions.

I am indebted to everybody who proofread my manuscripts and parts of this thesis.

Many thanks to all the researchers I was able to talk to and discuss with throughout the last years.

I want to thank those students who were willing to answer my questionnaires and everybody else who supported this study at the University of Lüneburg (aka Leuphana University Lüneburg).

And last, but not least, my sincere thanks to my friends, for being my friends; to my parents and sisters for giving me the love, ability, and confidence to become the person I am; and to Nils, for our complicity and love that gave me, among so much more, the strength to finish this thesis.

DANKE!

TABLE OF CONTENT

ACKNOWLEDGEMENT.....	III
LIST OF FIGURES	VII
LIST OF TABLES	VIII
1. INTRODUCTION AND CONTEXTUALISATION.....	1
1.1 INTRODUCTION	1
1.2 CONTEXTUALISATION	4
1.2.1 <i>Intergroup nature of the merger</i>	4
1.2.2 <i>Mergers in higher education</i>	5
2. THEORETICAL BACKGROUND	8
2.1 SOCIAL IDENTITY AND INTERGROUP PERSPECTIVE	8
2.1.1 <i>A social identity approach</i>	9
2.1.2 <i>Interdependence between groups: Conflict and cooperation</i>	12
2.1.3 <i>Intergroup contact</i>	13
2.2 TEMPORAL MATTERS IN THEORY AND METHODOLOGY	15
2.2.1 <i>Time and change in social psychology</i>	15
2.2.2 <i>Time, change, and longitudinal methods of analysis</i>	17
3. PRESENT STUDY	19
3.1 FIELD SITUATION	19
3.2 DATA COLLECTION THROUGHOUT CHANGE PROCESS.....	20
3.3 GENERAL RESEARCH QUESTIONS	21
4. PREDICTING CHANGES IN POST-MERGER IDENTIFICATION THROUGHOUT A MERGER PROCESS.....	24
4.1 INTRODUCTION	24
4.2 THEORETICAL BACKGROUND.....	26
4.2.1 <i>Change and the temporal perspective</i>	26
4.2.2 <i>Change throughout the merger process</i>	27
4.2.3 <i>Specificity of post-merger identification</i>	27
4.2.4 <i>Pre-merger identification</i>	29
4.2.5 <i>Ingroup typicality</i>	30
4.2.6 <i>Perceived fairness in the merger process</i>	31

4.3 METHOD	33
4.3.1 <i>Participants</i>	33
4.3.2 <i>Design and procedure</i>	34
4.3.3 <i>Measures</i>	34
4.3.4 <i>Analyses</i>	35
4.4 RESULTS	36
4.4.1 <i>Panel attrition and comparison of participants</i>	36
4.4.2 <i>Preliminary analysis: Changes of means over time</i>	37
4.4.3 <i>A multilevel model for change</i>	41
4.4.3.1 <i>A multilevel model for change of post-merger identification</i>	41
4.4.3.2 <i>Predicting post-merger identification</i>	45
4.5 DISCUSSION	50
4.5.1 <i>Change in post-merger identification and its predictors</i>	50
4.5.2 <i>Theoretical implication</i>	53
4.5.3 <i>Conclusion</i>	54
5. ANTECEDENTS AND CONSEQUENCES OF INGROUP BIAS THROUGHOUT A MERGER	55
5.1 INTRODUCTION	55
5.2 THEORETICAL BACKGROUND.....	56
5.2.1 <i>Ingroup bias in the context of mergers</i>	56
5.2.2 <i>Pre-merger identification</i>	58
5.2.3 <i>Post-merger identification</i>	58
5.3.4 <i>Dual identification</i>	59
5.3.5 <i>Positive intergroup contact</i>	60
5.3.5 <i>Consequences of ingroup bias</i>	61
5.3 HYPOTHESES	62
5.4 METHOD	63
5.4.1 <i>Participants</i>	63
5.4.2 <i>Design and procedure</i>	64
5.4.3 <i>Measures</i>	64
5.5 RESULTS	65
5.5.1 <i>Panel attrition</i>	65
5.5.2 <i>Preliminary analysis: Change in variables over time and intercorrelations</i>	66
5.5.4 <i>Dual identification</i>	72

5.5.5 <i>Consequences of both measures of ingroup bias</i>	74
5.6 DISCUSSION	75
5.6.1 <i>Antecedents and consequences of ingroup bias</i>	76
5.6.2 <i>Different functions of ingroup bias</i>	78
5.6.3 <i>Conclusion</i>	80
6. GENERAL DISCUSSION - IDENTIFICATION PROCESSES AND INTERGROUP RELATIONS THROUGHOUT A MERGER	81
6.1 DISCUSSION OF RESULTS	82
6.1.1 <i>Limitations</i>	83
6.1.2 <i>Integration of results</i>	84
6.2 THEORETICAL AND METHODOLOGICAL IMPLICATIONS	86
6.2.1 <i>Negative valence of the newly merged organisation</i>	86
6.2.2 <i>Temporal matters and change in social psychology</i>	88
6.2.3 <i>Longitudinal methods of analysis</i>	89
6.3 SUGGESTIONS FOR FUTURE RESEARCH	92
6.4 LINKING THEORY AND PRACTICE.....	94
6.4.1 <i>Managing mergers</i>	94
6.4.2 <i>Merging divergent campuses - challenges for higher education leaders</i>	96
6.5 CONCLUDING REMARKS	97
REFERENCES.....	99
APPENDIX.....	125
SUMMARY	128
ZUSAMMENFASSUNG	131
CURRICULUM VITAE.....	135
EHRENWÖRTLICHE ERKLÄRUNG.....	136

List of Figures

<i>Figure 1. Effects of pre-merger identification and time on post-merger identification for members of the dominant organisation.</i>	<i>47</i>
<i>Figure 2. Effects of pre-merger identification and time on post-merger identification for members of the subordinate organisation.</i>	<i>47</i>
<i>Figure 3. Effects of perceived fairness and time on post-merger identification across members of both organisations.</i>	<i>49</i>
<i>Figure 4. Path-model: Antecedents of judgemental and behavioural ingroup bias.</i>	<i>69</i>
<i>Figure 5. Path-model: Consequences of judgemental and behavioural ingroup bias. ..</i>	<i>74</i>
<i>Figure 6. Multivariant ALT model (adapted from Christ et al., 2006).</i>	<i>91</i>

List of Tables

<i>Table 1. Means and standard deviation, and changes over time and differences between groups</i>	<i>38</i>
<i>Table 2. Cross-sectional correlations between variables at Time 1, Time 2, and Time 3 (N=157)</i>	<i>40</i>
<i>Table 3. Estimates of fixed and random effects from a series of multilevel models of change with pre-merger identification, ingroup typicality, and perceived fairness as time-varying predictors (N=156).....</i>	<i>43</i>
<i>Table 4. Means and standard deviation, for change over time and differences between groups</i>	<i>67</i>
<i>Table 5. Intercorrelations between variables at Time 1 and Time 2 (N=211).....</i>	<i>68</i>
<i>Table 6. Regression weights for a two-wave panel model for judgemental and behavioural bias measure</i>	<i>71</i>
<i>Table 7. Regression weights for a two-wave panel model for positive stance on merger.....</i>	<i>75</i>

*The slow one now
Will later be fast
As the present now
Will later be past
The order is
Rapidly fadin'.
And the first one now
Will later be last
For the times they are a-changin.

(Bob Dylan)*

1. Introduction and Contextualisation

1.1 Introduction

Mergers between groups are an everyday occurrence in society. For instance, in early 2006 Schering and Bayer, leading pharmaceutical companies in Germany, announced their fusion. Alongside corporate mergers, there is an ongoing discussion whether some federal states and communities should merge. Moreover, schools and universities are fused to save money or counteract demographic developments. Generally, profit and non-profit organisations merge to become bigger, more efficient, and because resources are scarce. Although it is commonly assumed that mergers are beneficial (business) practises, two-thirds of all mergers do not meet their expectations and fail, for example, financially (Cartwright & Cooper, 1995; Ernst & Young, 2006). Already in 1929 James McKinsey, the founder of McKinsey and Company, acknowledged this issue:

I do not wish to convey the impression that [...] not much benefit may be gained from mergers or that mergers are not beneficial. [...] but I do believe that those of us who are interested in companies which it is proposed to merge [...] should give serious considerations to all the problems which may result from such consolidation. (pp 335-336)

This raises the question how we can understand success or failure throughout a merger. Problems regarding success or failure of mergers are often ascribed to resistance towards change by organisational members (Haunschild, Moreland, & Murrell, 1994). For example, in previous research it was shown that mergers create psychological and behavioural reactions such as stress, turnover intentions, lower self-esteem, anxiety, and illness leading to reduced job satisfaction and increased resistance

(Cartwright, 2005; Hogan & Overmyer-Day, 1994; Klendauer, Frey, & Greitemeyer, 2006; Terry, Callan, & Sartori, 1996). Difficulties may arise because of psychological reactions on the group level. McKinsey summarised these problems as such:

Another important problem is the development of a proper *esprit de corps* among the employees of the new organisation. When two or more competing companies are merged there is sometimes a feeling of jealousy and rivalry between the employees which does not promote the greatest efficiency in the new organisation. Each group of employees is inclined to be loyal to its former company and to doubt the efficiency of the employees of the other company.
(p. 334, italics in original)

This almost ninety year old quote includes key concepts of social psychology and more specific intergroup research that are critical to understand success and failure of mergers. Hence, an intergroup perspective may help to comprehend how intergroup relations impact on mergers and vice versa (Hogg & Terry, 2001). In other words, an intergroup perspective will be the theoretical point of departure of this thesis and its foundation.

Examining success and failure of mergers from an intergroup perspective means to focus on problems such as perception of large intergroup differences (e.g., Jetten, O'Brien, & Trindall, 2002) or conflicting corporate identities (e.g., Melewar & Harrold, 2000). Consequently, when analysing a merger from an intergroup perspective, it will be particularly important to understand identification processes (or the *esprit de corps* in McKinsey's terms) and *ingroup bias* as the systematic tendency to favour ones own group relative to an outgroup (Hewstone, Rubin, & Willis, 2002) (or as McKinsey described it: "*jealousy and rivalry between the employees*" and "*doubt the efficiency of the employees of the other company*").

The present thesis examines these two important aspects derived from intergroup research, namely identification and ingroup bias, in an ongoing university merger. The first endeavour is to understand how identification processes *change and develop* throughout a merger. It focuses on identification processes and especially post-merger identification because identification is a "valid indicator of the extent to which an employee is psychologically engaged" (Millward & Kyriakidou, 2004, p. 17). The aspects of development and change are crucial in understanding a merger *process*

(Cartwright & Schoenberg, 2006) and are important to include in social psychological and intergroup theorising (e.g., Reicher, 2004), where they are mainly neglected. Besides this focus on change of identification, the second endeavour is to examine determinants and consequences of intergroup conflict, expressed as ingroup bias, and providing an understanding of intergroup relations throughout the merger process.

Importantly, the aspect of identification development and stability and change in ingroup bias allude to the longitudinal nature of the present thesis. Data were collected at three points of measurement over one year throughout a merger process. This allows focusing on the procedural and temporal aspects of mergers that have been neglected in previous research despite of calls for research conducted as the merger process unfolds (Cartwright & Schoenberg, 2006; Seo & Hill, 2005). It permits to test for the dynamic aspects and the role of change over time in social psychological constructs. Therefore, the second important basis for the present study is the concentration on change and development and its longitudinal character.

In previous social psychological merger literature (i.e., Bartels, Douwes, de Jong, & Pruyn, 2006; Mottola, Bachman, Gaertner, & Dovidio, 1997; Terry & O'Brien, 2001; van Knippenberg, van Knippenberg, Monden, & de Lima, 2002), cross-sectional surveys are typically used to test the influence on identification or ingroup bias (for an exception: Amiot, Terry, & Callan, in press; Amiot, Terry, Jimmieson, & Callan, 2006). Yet, with such an approach it is impossible to test directional hypothesis. With longitudinal data, the disadvantages of cross-sectional data and its limited explanatory power can be overcome (Cook & Campbell, 1979; Taris, 2000). In that sense, with present data from a merger between two institutions of higher education, growth and development as well as on directional effects can be examined. The developmental aspects are analysed using a multilevel model for change, as will be described in chapter 4. Directional hypothesis are tested with cross-lagged- panel analyses, which will be shown in chapter 5. Moreover, the emphasis on change highlights another assumption by McKinsey (1929), namely that

It usually takes a considerable period of time and the exerting of a considerable amount of diplomacy on the part of the management to develop the same spirit of loyalty in the new organisation as existed among the employees of the separate organisations. (p. 334)

In the following parts of chapter 1, a brief description of the intergroup nature of mergers and an introduction to mergers in the higher education sector is given. In chapter 2, the social identity approach is presented as well as other relevant models, such as the interdependence perspective on group processes and the contact hypothesis. Additionally, the concepts of change and time as a theoretical important variable are introduced. In general, chapter 2 provides the theoretical background for the present thesis and leads to an elaboration of the broad research goal how to explain success and failure throughout a merger. Chapter 3 describes the present study, introducing the field situation and offers a further deduction of the general research questions. In chapter 4, empirical evidence for changes in post-merger identification is reported. Further, chapter 5 focuses on the antecedences and consequences of ingroup bias. In chapter 6, the empirical findings that were obtained are summarised and discussed with regard to their theoretical and practical implications.

1.2 Contextualisation

After an introduction of the general scope, I will define the context of the present study. Two aspects will be highlighted, namely the intergroup nature of mergers and the specificity of higher educational mergers.

1.2.1 Intergroup nature of the merger

Besides economic, financial, and strategic factors, the “human” side of mergers has been drawn on to explain merger success or failure (Buono & Bowditch, 1989). The central argument is that success depends on organisational members’ reactions towards the merger and involved groups (Cartwright & Cooper, 1992; Ernst & Young, 2006). In the past years psychological processes during mergers have been highlighted (Hogan & Overmyer-Day, 1994; Ivancevich, Schweiger, & Power, 1987; Klendauer et al., 2006) and research evolved from the individual level perspective especially focusing on stress (e.g., Amiot et al., 2006; Fugate, Kinicki, & Schenk, 2002; Ivancevich, et al., 1987) and other emotional reactions (e.g., Kiefer, 2002, 2005; Marks & Mirvis, 1986, 1992). Yet, research also focused on group-related issues of mergers and relied on an intergroup perspective (Amiot et al., in press; Terry, 2001, for an overview).

Why an intergroup perspective is particularly interesting when dealing with a merger becomes apparent when focusing on how a merger is defined. One basic definition of a merger is *the combining of two or more organisations into one* (Hogan & Overmyer-Day, 1994). Generally, a merger could imply the combination of two profit-

or non-profit organisations, educational institutions, working groups, or any other group. The Merriam-Webster-Online-Dictionary (2007) defines a merger as “absorption by a corporation of one or more others; also: any of various methods of combining two or more organisations.” For the current thesis, the term *merger* will be used to acknowledge both mergers and acquisitions¹ and is defined as a *combination of former two or more independent organisations (or groups) regardless of differences in size or power between the entities*. This definition discloses that a merger triggers *intergroup behaviour* as defined by Sherif (1966a): “Whenever individuals belonging to one group interact, collectively or individually, with another group or its members in terms of their group identification, we have an instance of intergroup behaviour.” (p.12)

To sum, mergers can be understood by definition as a basic (inter-) group process, which is not only limited to the organisational field (Giessner, 2004). In the present thesis, I will focus on group-related aspects that are relevant in a merger. Hence, theoretical issues of intergroup and social psychological research are important for the understanding of mergers and will be more closely considered in chapter 2.

1.2.2 Mergers in higher education

The present study rests on data from a university merger that included the consolidation of two higher education institutes. Goedegebuure (1992) defined a merger in higher education as:

A merger in higher education is the combination of two or more separate institutions into a single new entity in which control rests with a single governing body and a single chief executive body, and whereby all assets, liabilities and responsibilities of the former institutions are transferred to a single institution. (p. 16)

This definition is similar to the more general definition as described above and clarifies that mergers in the higher education system represent a special case of organisational mergers. Over the past thirty years, mergers have become an increasingly

¹ Mergers and acquisitions are legally different transactions. In legal terms, a *merger* is a combination of two or more judicial and commercial independent organisations in which one of them survives and the other disappears (Lucks & Meckl, 2002). In an *acquisition* property, including a complete firm or only shared value, is procured. Herein the legal independence can persist, whereas the commercial independence is restricted. Often researchers use the term *merger* to imply a marriage of equals and an *acquisition* as absorption of one organisation by another. In practice, *mergers and acquisition* (also M & A) form a collective term and the included words are used interchangeable (Buono & Bowditch, 1989; Hogan & Overmyer-Day, 1994).

common phenomenon across higher education systems. Many countries have been influenced by such changes - Canada, Great Britain, the Netherlands, Norway, Sweden, Hungary, Vietnam, New Zealand, and Australia, to name a few (Harman & Meek, 2002). Lately, German universities and polytechnics were affected by such mergers, too (Zechlin, 2003). Mergers in higher education have been implemented by the national and federal governments to achieve major restructuring and to address problems of institutional fragmentation, lack of financial and academic viability, and low efficiency and quality (Harman & Harman, 2003).

Mergers can be differentiated alongside diverse aspects. Mergers may involve different forms of higher educational institutions, that is, they are *single-* or *cross-sectoral mergers*. Hence, universities but also colleges of advanced education or polytechnics are brought together. A further conceptualisation is whether the merger incorporates *two* or *more partners*. Additionally, the range of academic profiles included in the merger is an important variable. Exemplarily, a useful distinction can be made between mergers of institutions that offer courses in the same field opposed to those mergers by institutions offering courses in different fields. The first form can be referred to as *horizontal merger* and the second as *vertical merger* (Harman & Harman, 2003; Lang, 2002).

One of the central questions in higher education merger is: Who initiated the merger? In most countries, educational mergers have been involuntary and have been regarded by authorities as a measure to restructure the higher education sector (Harman & Harman, 2003; Lang, 2002; Skodvin, 1999). Some mergers result from the initiatives of the participating institutions themselves but most are implemented because of external pressures, particularly from the government. Consequently, one can distinguish between *voluntary* (initiated by one or both merger partners) and *involuntary* mergers (initiated by a third party, such as the state) (Harman & Harman, 2003; Lang, 2002; Skodvin, 1999). The degree of voluntariness influences the merger success. Generally, involuntary mergers are less successful than forced mergers. For example, in state-initiated mergers which are not requested by employees or students of the different higher education institutions, organisational members are less willing to cooperate and often resist merger plans (Skodvin, 1999). On the other side, voluntary mergers are easier to organise and are more successful because it is possible to achieve a substantial degree of organisational members' involvement (Harman & Harman, 2003).

Of importance is the question why higher education institutes merge. As in other organisational mergers the motive to fuse is either growth or survival (Cartwright & Cooper, 1992). More specific for the higher education sector, a merger could either be the solution for an economic crises and/ or the expansion of education capacity and efficiency (Lang, 2002; Skodvin, 1999). When looking more closely at the results of educational mergers, Skodvin (1999) distinguished between three dimensions:

- a) Governance, management, and administration
- b) Economics
- c) Academic activities

Skodvin (1999) reviewed some mergers alongside these dimensions and found that mergers usually lead to an improvement in management, organisation, and administration. Results become more mixed when looking at the financial gains. In general, although mergers are initiated to save money, they require many resources for planning, coordination, and physical infrastructure. In the short run, mergers become very expensive (Patterson, 2000). Therefore, to evaluate the economic success it seems useful to differentiate between short- and long-term effects of a merger. Lastly, higher educational mergers are implemented to create better academic institutions. Again, experience and results are mixed. According to Skodvin (1999), in particular in Great Britain the goal of better academic position has not been achieved in some mergers. Still, there are other examples that show that mergers improve the future standing of new institutions. Mergers in Australia, USA, and the Netherlands, for example, have created broader and more multidisciplinary programmes that function well today (Skodvin, 1999).

To summarise, educational mergers are a special case of organisational mergers that are often characterised by their involuntary nature. The motive to merge is often either growth or survival and comprises some kind of gain. Yet, a merger is one of the most significant events an institution may engage in and frequently involves considerable financial and human costs (Harman & Harman, 2003). After this contextual subsumption, I will, in the following chapter, emphasise some theoretical approaches relevant for the empirical chapters by first focusing on theoretical models of intergroup relations and second, introducing some ideas about the role of time and change in social psychological research.

2. Theoretical Background

This chapter presents the general theoretical background for this thesis. It leads, after a description of the field study that provides the data basis, to a formulation of the more specific research questions, which will be empirically tested in chapter 4 and 5.

2.1 *Social Identity and Intergroup Perspective*

Social psychological insights have been increasingly used to analyse issues and problems that arise in organisational settings (Haslam, van Knippenberg, Platow, & Ellemers, 2003; Hogg & Terry, 2001), including organisational change (Jetten et al., 2002) and mergers (Haunschild et al., 1994). The common assumption is that organisational behaviour is to an important extent determined by people's membership in social groups and can be understood with references to intragroup and intergroup relations. Therefore, organisational scholars using a social psychological perspective are primarily interested in better understanding (1) how the individual relates to the collective (organisation), and (2) how intergroup relations between organisations or work-units function (Ellemers, Haslam, Platow, & van Knippenberg, 2003; Pratt, 2001).

The first issue is expressed in the notion of organisational identification. Ashforth and Mael (1989) were the first to argue that the notion of *organisational identification* is a specific form of social identification. It reflects "the perception of oneness with or belongingness to an organisation, where the individual defines himself or herself in terms of the organisation(s) in which he or she is a member" (Mael & Ashforth, 1992, p. 102) and is further defined as involving "direct and vicarious experience of its [the organisations] success and failures" (Ashforth & Mael, 1989, p. 62). Hence, organisational identification describes the relationship between the self and the organisation and implies cognitive and emotional aspects of the self's involvement in the organisation (Pratt, 1998). The strength of identification influences whether people engage in behaviour that is oriented towards and structured by organisations norms, values, and characteristics and which are internalized as a particular organisational identity (Haslam, Postmes, & Ellemers, 2003). Hence, increased levels of organisational identification should lead to a higher chance that organisational members take the organisation's perspective and act in terms of it (Ashforth & Mael, 1989; van Knippenberg & van Leeuwen, 2001).

Secondly, intergroup relations are of interest especially when focusing on organisational conflict and diversity management (Pratt, 2001). Researchers want to know how groups in organisations interact and how to manage diversity in work groups and subdivisions. Much of the present research on diversity management has to do with differences in demographic characteristics or social category diversity within and between organisations, such as gender. Thereby, research focused, for example, on the amount of diversity in the work group, and size and status of demographic subgroups.

Consequently, when focusing on these two issues of identification and intergroup relations in an organisational setting, the relevant level of analysis is on the group level rather than on the individual level (Lorenzi-Cioldi & Doise, 1990). Differently from Floyd Allport (1924), who emphasized a strict individualism by stating that there is no psychology of a group which is not fundamentally and entirely a psychology of the individual, other social psychologists insisted that a social group is a distinct and real entity that is more than the sum of the single individuals (Brewer & Brown, 1998). Additionally, human behaviour can vary between interpersonal (acting as an individual) and intergroup behaviour (see section 1.2 for a definition of intergroup behaviour).

When thinking about organisational mergers as an intergroup phenomenon, one focuses on attitudes and behaviour in terms of group membership and applies theoretical insights on what is special about behaviour as members of social groups. Some of the relevant theoretical models that deal with group behaviour and explain what is special about membership in groups and group behaviour will be reviewed in the following section.

2.1.1 A social identity approach

One central theoretical model that deals with group behaviour is the social identity approach (SIA). It arose from European research on social categorisation and social identification at the end of the 1970s. The approach includes Social Identity Theory (SIT, Tajfel & Turner, 1986; updated and retitled version of Tajfel & Turner, 1979) and Self-Categorisation Theory (SCT, Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), as well as other distinct but compatible and dynamically interrelated conceptual components (Hogg & Terry, 2001). SIA represents a convergence of ideas on social categorisation (Doise, 1978; Rosch, 1978; Tajfel, 1969) and social comparison (Festinger, 1954). The fundamental assumption is that individuals perceive the world in terms of categories. A *social category* is defined as reduced information about a social

group included into a discrete class. By categorising individuals as belonging to one social entity, perceived differences within categories are minimized and differences between categories maximized. The perceived membership in social categories can contribute to a self-definition that includes a *social identity* defined as “that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership” (Tajfel, 1978, p. 63).

SIT was formulised as an integrative theory of intergroup conflict (Tajfel & Turner, 1979). It aimed to supplement the Realistic Conflict Theory (RCT; Sherif, 1966b; see section 2.3.3 for more details) by focusing on processes underlying the development and maintenance of group identity and its effect on intergroup behaviour (Tajfel & Turner, 1979). Tajfel and Turner assumed that one fundamental aspect of intergroup behaviour is the differentiation in social categories and group membership defined by those social categories. According to SIT, people strive for a positive self-concept. This self-concept consists of a personal identity and a social identity. In order to attain a positive self-concept, people try to belong to groups that are positively distinct from other social groups (Tajfel & Turner, 1979). Thus, people attempt a positive social identity (as part of the self-concept) through the motivation for positive group distinctiveness. It is assumed that this is mainly driven by the need for positive self-esteem and uncertainty reduction (Abrams & Hogg, 1988; but see also Vignoles, Regalia, Manzi, Gollledge, & Scabini, 2006). Under certain conditions, mere group membership is sufficient to develop discriminatory behaviour or ingroup bias - that is, the tendency to favour the ingroup over the outgroup in evaluation and behaviour and constitutes the laboratory equivalent to ethnocentrism. Ingroup bias is motivated by creating and protecting a high ingroup status, thereby providing a positive social identity.

SIT accounts for the motivational components as well as the emotional and behavioural consequences of ingroup identification (Brewer & Brown, 1998). It provides a powerful explanation for a variety of intergroup phenomenon such as ingroup favouritism and bias, the response of lower status groups to inequality, and stereotyping (Brown, 2000, for a review). Basic ideas from SIT were further examined in respect to the role of social identity as part of the self-concept by Turner (1982). Intergroup, self-conceptual, and motivational emphases were investigated by Hogg and Abrams (1988). Further, Turner and colleagues (1987) extended the SIT through SCT

by specifying how social categorisation produces prototype-based depersonalization of self and others.

SCT addresses more detailed the origin, nature, and consequences of group formation. It is ascribed as a theory that redefines the cognitive aspects of social groups (Turner, 1982). SCT is based on the same assumption as SIT, namely that individuals define themselves as members of social groups, a process that was named *self-categorisation*. Self-categorisation leads to the perception of the self in terms of typical characteristics that are shared with other ingroup members. Social categorisation accentuates the perceived similarity of a target to the relevant ingroup or outgroup, which is then no longer perceived as an individual but as the embodiment of the relevant prototype, that is the process of depersonalization. The self-categorisation by means of social categories cognitively assimilates the self to the ingroup prototype and implies a depersonalised self-concept. This transformation of the self is a process underlying group phenomena, because it brings the self-perception and behaviour in line with a relevant ingroup prototype (Hogg & Terry, 2001). The self in terms of group membership is the basis for perceptual, attitudinal and behavioural reactions of group membership. Self-categorisation enables an individual to locate or define him- or herself in the social environment. The more an individual sees herself as a group member, that is, the more a person identifies with the group, the more attitudes and behaviour are led by group membership (Tajfel & Turner, 1986; Turner et al., 1987). As persons self-categorise, they start to define themselves in terms of that category, leading to a social identification defined as the perception of oneness with a social category (Tajfel & Turner, 1986).

In SCT it is defined when and how social categories and group membership become salient. The cognitive system matches social categories to properties of the social context and makes salient the category that is rendered in this context. Two important preconditions are the *cognitive accessibility* and the *category fit*. Accessibility is given when, for example, a social category is an important, valued, and frequently employed aspect of the self-concept (chronic accessibility). Categories fit the social context when they account for situational relevant intra-group similarities and intergroup differences (structural/ comparative fit). Category fit is defined by category specification for context-specific behaviours (normative fit). Self-categorisation processes underpin the cognitive representation of groups and, therefore, group formation (Haslam, Turner, Oakes, & McGarty, 1992).

Self-categorisations are established on several levels of abstraction that vary in inclusiveness and are hierarchically structured. According to SCT, higher order categories furnish the relevant dimensions for comparison between included sub-categories. Thus, categories of a given subordinate level (university A, university B) are compared in terms of a superordinate category (general educational institutions). The positive or negative evaluation depends on the perceived prototype (the typical educational institution). The notion of prototypes is central to SCT. Prototypes are described as fuzzy-sets that capture the context-dependent features of group-membership, in form of a representation of an exemplary member or an ideal type. Prototypes represent all attributes that characterise groups and distinguish them from other groups (Hogg & Terry, 2001).

Generally, social categories and social identity are relational concepts that become salient under conditions of intergroup comparison. Hence, they are highly context-dependent, because their characteristics will vary as a function of intergroup comparison in a social context (Haslam & Turner, 1992; Haslam et al., 1992).

The theoretical reconsiderations of SIT and SCT provide the overall theoretical framework of the present research and its application to the field. However, some researchers noted that when applying social identity insights to the organisational domain, a certain ambiguity in the exact definition and measurement of central concepts remains and that researchers should be careful when using constructs interchangeably (see Ellemers et al., 2003 for details). Pratt (2001), however, concluded that research in the organisational setting can contribute to the understanding of social identity dynamics and vice versa. The application of SIA adds to the breadth of the theory and extends the approach by combining it with other theories and models, reflecting the current approach.

Some other relevant theoretical models will be described in the following section. They add to the SIA by stressing the interdependent nature of intergroup relations and the effect of intergroup contact on intergroup relations.

2.1.2 Interdependence between groups: Conflict and cooperation

Previously, it was stated that SIT was formulated to supplement RCT (Campbell, 1965; Sherif, 1966a; Sherif & Sherif, 1953). This approach stresses the structural relations among groups (e.g., common fate, interdependence). The main hypothesis is that intergroup attitudes and behaviour tend to reflect group interests.

Within social psychology one of the most influential proponents of RCT was Muzafer Sherif. In a large-scale field experiment, Sherif and Sherif (1953) could show that facilitating competition between groups led to hostile behaviour between groups and to ingroup favouritism. Cooperation led to positive intergroup behaviour and cross-group friendship (Sherif & Sherif, 1953). The empirical results confirmed the basic hypothesis that intergroup conflict or hostility is produced by the existence of conflicting goals (competition) and reduced by the existence of intergroup cooperation (Jackson, 1993). The theory stressed that positive and negative interdependence between groups is essential to shape intergroup behaviour. Subsequent research has mainly confirmed the findings by Sherif. In laboratory studies it was shown that interdependence between group's influences attitudes and behaviour (Brewer & Brown, 1998).

RCT mainly focuses on the context of intergroup relations. However, also Sherif acknowledged the role of ingroup identification. His view was that intergroup conflict leads to negative stereotyping and prejudice which gives rise to intragroup solidarity. Therefore, intergroup conflict strengthens intragroup relations that sustain ingroup identification (Jackson, 1993). Tajfel and Turner (1979) wrote that in RCT identification is an epiphenomenon of intergroup conflict, whereas they were more interested in the underlying mechanisms of ingroup identification (see section 2.3.1).

RCT, as well as modern interdependence approaches (e.g., Gaertner, L. & Insko, 2000; Rabbie, Schot, & Visser, 1989) and SIA, commonly aim at understanding the nature of intergroup relations. Nevertheless, the approaches differently define the basic concept of social groups. In SIA, the similarities within and the differences between social categories characterise a social group. In interdependence approaches, the focus lies on the functional relations within and between groups and the perceived interdependence between individual members and groups.

Although the main focus of the present research is on the SIA, I will come back to basic ideas of the interdependence approach in chapter 5.

2.1.3 Intergroup contact

A third theoretical approach, which will become important in understanding the nature of merger success, is the contact hypothesis, one of the most successful and important assumptions in social psychology (Allport, 1954). Its central idea is that one way to reduce tensions between groups, hence to reduce intergroup conflict, is to bring the groups into contact with each other. Allport noted that it is not the contact that

reduces prejudice and stereotypes but that certain preconditions have to hold to enable the positive effects of intergroup contact. He stated that equal status is necessary, as well as the pursuit of a common goal, cooperation, and institutional support. Over the last 50 years, much research has dealt with elaborating and redefining these contact conditions (see Pettigrew, 1998; Pettigrew & Tropp, 2006 for an overview). The meta-analytic findings by Pettigrew and Tropp (2006) showed that Allport's conditions indeed play a role in promoting positive intergroup outcomes. However, even intergroup contact alone seemed to reduce prejudice.

Current research focused mostly on the underlying processes and the question why contact reduces prejudice. For example, contact might reduce intergroup anxiety, which will lead to decreased prejudice (Brown & Hewstone, 2005). Other mediating variables are familiarity and liking, or recategorisation as a more inclusive view of the ingroup (Gaertner, S. & Dovidio, 2000; Pettigrew, 1998). Additionally, present research focused on the long-term processes that are involved when contact reduces prejudice (Eller & Abrams, 2003, 2004; Pettigrew, 1998).

Bringing together social categorisation theory and the contact model, the focus in contact research has been shifted to the understanding of the cognitive mechanisms through which contact may alter intergroup attitudes (Brewer & Brown, 1998). Social categorisation theory emphasises the role of cognitive representations of contact situations as a critical factor determining the outcome of an intergroup encounter. For example, in the common ingroup identity model (CIIM, Gaertner, S., Dovidio, Anastasio, Bachman, & Rust, 1993) it is suggested to structure a contact situation in a way that it highlights the perception of an inclusive, superordinate category. This encompasses both ingroup and outgroups in a single group representation, facilitating the positive effect of contact. Alternatively, the model of dual identification at different levels of social categorisation (Gaertner, S. & Dovidio, 2000; González & Brown, 2003) rests on the idea that the need for positive social identity should be taken into account in the intergroup contact situation. For example, members of the respective groups can have distinct but complementary roles to contribute to a common goal. In this sense, both groups can maintain their positive distinctiveness within a cooperative, inclusive category (Gaertner, S. & Dovidio, 2001; Hewstone & Brown, 1986). Other categorisation processes such as decategorisation (Brewer & Miller, 1984), dual identity (González & Brown, 2003), and multiple or cross-categorisation (Crisp, Walsh, & Hewstone, 2006) seem to underlie the contact effect under certain conditions but will

not be further discussed here. Noteworthy, it seems important to examine the cognitive representation of the intergroup encounter to understand the effect of intergroup contact on prejudice. This issue will be further seized in chapter 5.

The main theoretical background for the following empirical chapters is SIA and its application to the field. Moreover, I include related models such as the Ingroup Projection Model (Mummendey & Wenzel, 1999) and the Group Engagement Model (Tyler & Blader, 2003) which will be described later (section 4.2.6, 5.3.4). In general, I put a special emphasis on group-based variables to understand organisational members' reactions towards mergers. Before introducing the present study in more detail in chapter 3, some theoretical remarks on temporal matters in social psychology are made.

2.2 Temporal matters in theory and methodology

As outlined before, one important feature of the present thesis is the emphasis on temporal and procedural aspects in identification and intergroup relations. Thereby *time and change* are of importance in regard to theoretical considerations and in consequence for the application of methodology. How this will be done in this thesis, is described in the following sections.

2.2.1 Time and change in social psychology

One central aspect of this thesis is the focus on change over time. In general, time and change are fundamental aspects of human existence, and pose challenges for research, both theoretically and methodologically. Temporal factors and change are, often implicitly, included in social psychological research, for example in stereotype change research (Garcia-Marques, Santos, & Mackie, 2006; Weber & Crocker, 1983), group formation and development (Eisenbeiss & Otten, 2005; Tuckman, 1965; Worchel, 1998), or, somewhat more explicit, in construal level theory (Trope & Liberman, 2003). Nevertheless, time has rarely been included as a *theoretical* central variable² (McGrath & Tschau, 2004). The lack of theorising time and change in social psychology might be due to the difficult conceptualisation and definition of time (McGrath & Tschau, 2004). Yet, one possible definition, abutted from a Newtonian time perspective (Levine, 2003), describes time as “a nonspatial continuum in which events occur in apparently irreversible succession from the past through the present to the future” (Ancona, Okhuysen, & Perlow, 2001, p. 513; for a criticism of this time

² But see *Developmental Social Psychology* that deals with social psychological processes over the life span (e.g., Durkin, 1995).

concept see Levine, 2003). When time is defined as an objective and interindividually experienced concept, it can be understood as a contextual variable that should have substantive conceptual and methodological implication for social psychological research.

Zaheer, Albert and Zaheer (1999) stated that it is useful to consider time or *time scale*, defined as the size of a temporal interval, in theory development, exemplified for organisational research. Zaheer and her colleagues understood *time scale* as a concept that is analogous to the levels of analysis. Theories can only be adequate when accurately formulated for the level of analysis and time scale. This is important because the nature of relationships between phenomena may vary across time scales, as will be described in chapter 4. (Social) psychological theories usually entail propositions about relationships between constructs, mostly leaving temporal limitations unregarded. However, examining the temporal specificity of theories could contribute to the development of new theories or to a more accurate picture.

Until now, most social psychological approaches, including SIA, entail a holochronic perspective, which means that they were formulated independent of clear assumptions about time scales and do not explicitly include postulates about the duration of effects. Once an effect is established, it is typically assumed to persist over time (West, Biesanz, & Kwok, 2004). However, Tajfel (1982) and others (Condor, 1996) acknowledged the role for time on social identity processes. Tajfel (1982) understood the psychological existence of a group for its members as a complex sequence of appearance and disappearance. On the other hand, social identity needs some sense of continuity (Vignoles et al., 2006) and the potential for a sense of self to be projected across time (Condor, 1996). In SIA it is assumed that the relationship between social identity and, for example, intergroup differentiations is rather stable, appropriate for a longer time scale. Yet, the large-scale social categories are formulated as relatively enduring over time and although they might be influenced by shorter time periods (Condor, 1996). However, how long- and short-term effects may interact is not theorised in social psychological models. For social psychological research holds a statement by Whetten (1989, as cited in Zaheer et al., 1999):

Temporal and contextual factors set the boundaries for generalisability and as such constitute the range of the theory... unfortunately few theorists explicitly

focus on the contextual limits of their propositions...theorists should be accurate to think about whether their theoretical effects vary over time. (pp. 737-738)

By including the aspect of time and change explicitly in the empirical analysis and theoretical modelling (see chapter 4 and 5), I believe the present thesis accounts for some of the problems acknowledged by Whetten.

Another issue related to time and change is the question of causality. In any investigation of a causal relationship between variable A and variable B, the time when A and B are measured is crucial to determining whether A causes B (Mitchell & James, 2001). This holds especially when relying on the time definition as stated above. A key issue for correctly testing directed hypotheses and for making accurate inferences based on empirical results is knowing *when* A and B occur. In other words, it is not enough to know *that* A and B occur and that *A might cause B*. As Zaheer and colleagues (1999), Mitchell and James (2001) stated that this would be an inappropriate simplification of the relationship between A and B. Moreover, this relation includes five further points in respect to time that have to be theoretically addressed. As outlined above, the time lag or time scale has to be known. Second, both A and B have durations themselves, leaving the possibility that not all variables occur at the same time. Third, A and B may change over time (they are time-varying) and this rate of modification has to be considered. Fourth, the change in A and B can change the relationship between A and B. Finally, A and B could be reciprocally related, A causes B while B causes also A. Consequently, the simple statement that *A causes B* contains theorising about the time lag or scale, duration, and possible growth/ change rates (Mitchell & James, 2001). Like Zaheer et al. (1999), Mitchell and James (2001) emphasised theoretical propositions need to display a specific awareness of time and context. They proposed that one needs to understand which time lags are useful. Second, theorists must consider the amount of change. One must speculate about other variables that may be associated with the cause of change. Moreover, the research design and measurement should be appropriate to understand temporal matters and appropriate statistical procedures have to be applied.

2.2.2 Time, change, and longitudinal methods of analysis

To address some of the above mentioned implications and to understand the role of *change* throughout the merger process and how social psychological constructs are affected by change over time, different methodological approaches can be applied. Multilevel models for change, also called hierarchical linear model (HLM), are used to

understand growth and development in outcome variables as well as the influence of time-variant and time-invariant covariates. This kind of approach focuses on trajectories of change for individuals over time, describes developmental patterns, and identifies predictors for development. The observed repeated measure is used to estimate an underlying growth trajectory. The same logic applies to latent growth curve models (LGC). Both analytic approaches are appropriate to model growth across time and have been shown to provide equivalent estimates (Burchinal, Nelson, & Poe, 2006). The HLM or multilevel model for change is more appropriate in detecting moderation. It is comparably easy to create interaction terms and the analysis reveals more power. In contrast, the LGC provides considerably more power to detect mediation (Burchinal et al., 2006 for an overview). Still, both analytic approaches are useful to estimate growth curves and development for continuous outcomes.

Another way to deal with longitudinal data is to focus on cross-lagged effects that represent the longitudinal regression of one (or more) variables on the other, above and beyond the autoregressive prediction of that variable itself. In this sense, change is defined as a time-specific comparison in which an individual standing relative to the group mean at Time 2 is modelled as a function of relative standing to the mean at Time 1 (Christ, Schmidt, Schlüter, & Wagner, 2006).

In this study, as in general, the choice of a statistical model should depend on the theoretical question of interest and the perspective under which change and causation is examined (Curren & Bollen, 2001). Both approaches, multilevel models for change and autoregressive approaches, have a clear advantage, as they adequately provide answers to specific questions. In the empirical chapter, I will more thoroughly describe the research questions and the analysis method of choice.

To sum up, this chapter described the broader theoretical background that is necessary to answer the research question how we can understand success and failure throughout a merger. Thereby, specific emphasis was put on an intergroup perspective and theories that deal with group behaviour as the first basis of this thesis. Moreover, I stressed the theoretical role of change and time, building the second basis for my thesis, and the role of longitudinal methods that are adequate for analysing the present data from a higher education merger.

3. Present Study

In the following chapter, I will first introduce the field situation that provides the empirical basis for the present study. Subsequently, the general aim and research question will be presented and a short introduction on the rationale of the chosen methodology in regard to the longitudinal nature of the present study.

3.1 Field Situation

This longitudinal study was conducted in the context of a merger between two higher education institutions: one university and a polytechnic college. Both institutions were situated in the same city and offered partly different and partly similar courses. The polytechnic offered diverse engineering classes, economics, and social studies. The main focus of the university was on teachers training, applied cultural science, and economics. In 2003, after elections in the federal state where the two institutions are located, the new government presented a plan to optimise the higher education sector. The goal was a cost-effective restructuring of the higher educational sector. The major challenge in this plan was the fusion of the university and polytechnic. It was the first merger of this kind in the German higher educational system, although most probably not the last one (Hener, 2005). Beforehand, only single-sector mergers between two universities were implemented (Zechlin, 2003). However, this merger was a cross-sectoral merger between two different kinds of higher education institutions. In the German tertiary education universities are regarded as more prestigious than polytechnics. In general, universities are more theoretical oriented whereas polytechnics are more practical and training oriented.

The merger was initiated by a governmental decision and merger plans were first launched in September 2003. The merger had two main aims: firstly, a very fast implementation of the Bologna declaration³ that included the reorganisation of degrees and study programs and secondly, economisation of costs on the side of the federal states government. This was to happen mostly through savings in administration and

³ Bologna Declaration: On 19 June 1999, 29 European Ministers in charge of higher education signed in Bologna the Declaration on establishing the European Area of higher education by 2010 and promoting the European System of higher education world-wide. The Ministers affirmed in this declaration their intention to adopt a system of easily readable and comparable degrees, to adopt a system with two main cycles (undergraduate/graduate), to establish a system of credits (such as ECTS), to promote mobility by overcoming obstacles, to promote European co-operation in quality assurance and to promote European dimensions in higher education (European Commission, 2006; http://ec.europa.eu/education/pdf_en.html)

management. From 2004 onwards, both institutions received yearly 1.6 million Euro less from the federal state government, on the other hand they received 2.6 Million Euro over three years for merger compensation (Chantelau, 2006).

After a year of negotiations, the federal state inked a law to regulate the merger process. The official day of the merger was January 1st 2005 and was in the middle of the winter term of 2004/2005.

The merger process involved firstly the fusion of all administrative units including libraries and computer centres. Thereafter, the eleven different schools and departments of the former university and polytechnic were restructured into three schools: a) educational, cultural, and social science, b) economical and behavioural science and law, c) environment and technique. The restructuring of institutions and schools was finalised in early 2006. Additionally, as part of the Bologna declaration, all previous degrees (including Diploma and Magister Atrium) were abolished and new degrees (Bachelor and Master) inaugurated.

In May 2006 a new president substituted the two former presidents. Initially, an earlier transfer was planned, but due to internal difficulties a first candidate neglected the offer and the next candidate has been officially assigned in October 2005. This president formed a new executive team that included former and new members. In early 2007, after completion of the present study, the president launched plans for further reconstructions at the newly merged university. This includes a new name that does not entail any similarity to one of the former names, a new degree structure that goes well beyond the guidelines by the Bologna Declaration, and establishing Colleges, Graduate Schools, and a Professional School.

3.2 Data Collection throughout Change Process

Shortly after the beginning of the summer term in April 2005 the first data collection was conducted in classes of economics in the former university and polytechnic. In April 2005, students of the departments of economics- and social science (former university) and economics (former polytechnic) had only separated classes and two different schools of economics. The two departments were located in different parts of the town and contact between the student groups was rare. First informative meetings about the new faculty structure were held shortly after the first survey was conducted. In the new school system, both former economics schools were consolidated into one. Beginning with the winter term 2005, semester dates that had

been different for the polytechnic and the university were synchronised and language classes and additional classes (e.g., computer courses, sport classes) were merged and offered for members of both organisations. For the first time, freshman students started to study officially at the newly merged organisation. The second questionnaire was administered shortly after the beginning of the winter term 2005. The last date of data collection was in April 2006 shortly after the start of the summer term. Until then the new department structure was implemented and the new president assigned.

To summarise, the merger was a cross-sectoral, two-partner, and involuntary merger (see chapter 1.3) that was implemented following an integration-proportionality pattern (Giessner, Viki, Terry, Otten, & Taeuber, 2006). Hence, both organisations were represented in the new merged university, although the former university was stronger represented than the polytechnic. Exemplarily, the name of the newly merged organisation equalled the name of the former university and the logo was very similar to the logo of the former university although the colours of the logo matched the former polytechnic (until the new launched plans in 2007). Furthermore, the merger was implemented in a way that until the new faculty structure was executed in April 2006, most of the members of the university remained segregated in their work and study tasks. The merger provides the empirical framework for the following research question.

3.3 General Research Questions

The present thesis focuses on organisational members' reactions towards a higher education merger, with a strong emphasis on an intergroup perspective. Theoretical concepts from intergroup research and in particular SIA are applied to this specific merger context. In section 1.3 specialties of higher education mergers were described. This involved the remark that involuntary mergers, like in the present case, seemed to be less successful than voluntary mergers. Generally, mergers fail more often than they succeed (Ernst & Young, 2006). To psychologically understand success and failure of mergers, it is necessary to understand support and resistance towards the merger, characterising the human factor in a merger (Buono & Bowditch, 1989; Haunschild et al., 1994, McKinsey, 1929). Accordingly, the main goal is to find out how constructs from intergroup research contribute to explain resistance or support of a merger? To render more precisely, how does adjustment to and a positive stance on a merger develop? This overall goal will be beheld from two perspectives:

Firstly, social, respectively organisational, identification is a key variable in the SIA and intergroup literature as described in chapter 2. Moreover, in the merger context, identification is considered as the key factor for merger adjustment and thus fostering merger success (Amiot et al., in press; Millward & Kyriakidou, 2004, see also chapter 4). The strength of identification indicates whether people are engaged in behaviour that benefits the specific organisation and its members. Previous research has examined the role of identification in mergers and identified antecedents of post-merger identification (Amiot et al., in press; Bartels et al., 2006; Ullrich & van Dick, in press). Yet, one neglected topic is the development of identification and the potential growth over time. The first research question, which specifies the general aim, is: *How does post-merger identification change throughout the merger process?* This question will be in detail deduced in chapter 4.

Secondly, the role of intergroup conflict and its antecedents and consequences are important in order to understand the psychological impact of a merger. The second research question, comprising the second perspective of examining merger adjustment, aims at understanding *what determinants of intergroup conflict are and which role intergroup conflict plays in predicting positive attitudes towards the merger*. Hereby, directional hypothesis and causal mechanisms among variables are of particular importance. This research question is focused on in depth in chapter 5.

These two research questions capture two different aspects of change that can be examined with longitudinal data as described in section 2.2. Accordingly, the first research question is how identification changes over time, and how the changes in identification vary by certain organisational characteristics. Methodologically, these aspects of change require multilevel model for change (Singer & Willet, 2003). In chapter 4, I will explain in detail the aim and application of this method. The second research question captures aspects of stability and change. It focuses on the causal relations between variables and aims at answering whether A influences B, or B influences A. Generally, these kinds of questions are modelled in cross-lagged-panel designs (Rogosa, 1980; Taris, 2000), as will be done in this thesis. Predictions about directional hypothesis are deduced in Chapter 5 and empirical results are presented.

Generally, the present thesis builds on earlier intergroup research on organisational mergers and integrates various aspects for answering the proposed research questions. Thereby, the application of those theoretical concepts to the field is especially important to assess the external validity. Moreover, a large emphasis is put on

testing to what extent proposed effects are sustainable over time and how they are affected by change. This is done, as outlined before, in the relation to a three-wave longitudinal study conducted throughout a higher education merger.

Nothing endures but change.

(Heraklitus)

4. Predicting Changes in Post-merger Identification throughout a Merger Process

4.1 Introduction

In this empirical chapter, I focus on the development of post-merger identification as a valid indicator for psychological engagement after a merger (Millward & Kyrikidou, 2004). I apply a Social Identity Approach (e.g., Ashforth & Mael, 1989; Haslam, 2001; Hogg & Terry, 2000) and examine one of the key concepts in SIA, namely identification with a social category. Social identification has been found to be related to an individual's role in an organisational setting affecting attitudes and commitment to the organisation as well as job involvement (Haslam, Postmes, & Ellemers, 2003; Ouwerkerk, Ellemers, & de Gilder, 1999). By the same token, adjustment to a merger is indicated by the extent to which organisational members identify with the merged group (Amiot et al., 2006) and causes decreased intergroup tensions (van Knippenberg et al., 2002). That means that whether and how strongly organisational members are willing and able to identify with the post-merger organisation (*post-merger identification*) is a key factor in understanding the success of a merger. Researchers have consequently focused on factors that influence post-merger identification such as identification with the pre-merger organisation (*pre-merger identification*) and perceived continuity or ingroup typicality (e.g., Bartels et al., 2006; van Leeuwen, van Knippenberg, & Ellemers, 2003; van Knippenberg et al., 2002). Furthermore, it has been shown that perception of a fair outcome and treatment during the merger (Amiot et al., in press; Lipponen, Olkonen, & Moilanen, 2004) influences post-merger identification. These three concepts (pre-merger identification, ingroup typicality, and perceived fairness) derived from an intergroup perspective have a significant effect on post-merger identification.

Remaining unclear is how post-merger identification changes in the course of a merger, and which factors affect variability in post-merger identification at different points in the process. To wit, the procedural and temporal aspects of mergers were neglected in previous research despite calls for merger research conducted as the merger process unfolds (Cartwright & Cooper, 1994; Cartwright & Schoenberg, 2006; Seo &

Hill, 2005). Systematic analyses of changes in post-merger identification and its antecedences have not been conducted. In general, only few studies (Amiot et al., 2006; Amiot et al., in press) have investigated social psychological processes using a longitudinal approach.

By conducting a longitudinal field study throughout a university merger, the focal point of this chapter is on the developmental and dynamic aspect of identification by investigating patterns of change in post-merger identification over three points of measurement. The thesis provides an analysis of systematic change in post-merger identification during the merger process. Secondly, it is explored whether variance in post-merger identification over time is predicted by pre-merger identification, ingroup typicality, and perceived fairness in the merger process as suggested by previous research (Amiot, et al., 2006; Bartels et al., 2006; van Knippenberg & van Leeuwen, 2001) and whether the predictive effects of these variables vary over time.

Only few mergers are merger of equals (Cartwright & Cooper, 1995; Giessner et al., 2006; van Oudenhoven & de Boer, 1995). Mostly, one merger partner is likely to be more dominant or the acquiring force. The dominant merger partner might seek to assimilate the organisation and impose its own pre-merger identity on the newly merged organisation (van Knippenberg et al., 2002). This also applies to the merger at hand that is a fusion between a university that is bigger in size and a smaller polytechnic. Therefore, I examine specific patterns of reactions towards change according to organisational dominance in the merger.

To summarise, this chapter aims to examine the following specific research questions:

1. What are the patterns of change in post-merger identification among organisational members of the dominant and subordinate merger partner in the early course of the merger process?
2. Is post-merger identification related to pre-merger identification, ingroup typicality, and perceived fairness? Secondly, do these associations change across time and do these patterns differ for organisational members of the dominant and subordinate merger partner?

4.2 Theoretical Background

In the following section, the specific research questions and consequential hypotheses will be deduced and empirically tested.

4.2.1 Change and the temporal perspective

In this chapter, I test how the outcome variable post-merger identification is affected by change during the merger process. This is important because mergers take time and move through different stages that affect psychological reactions towards the merger (Buono & Bowditch, 1989; Seo & Hill, 2005). The aim is to understand whether *changes* in post-merger identification are influenced by other factors such as pre-merger identification, ingroup typicality, and perceived fairness. The emphasis on change and changed influence of predictors is adapted from behavioural genetics research and developmental psychology where researchers, for example, aim to understand growth or change of concepts such as academic achievement and additionally analyse what predicts variability in growth or change (e.g., Johnson, McGue, & Icaono, 2006; Pan, Rowe, Singer, & Snow, 2005). To do so, longitudinal data is essential as well as statistical techniques that tap into these changes. Previous merger research dealt almost inclusively with cross-sectional data, assuming a relatively stable and static relation between predictor and outcome variables. Yet, social psychology and especially research embedded in the SIA (e.g., Tajfel & Turner, 1986; Turner et al., 1987) should include the contextual nature and issues of change. Already in the original work by Tajfel (e.g., 1980, 1982) the role of processes, dynamics, and time and its effects on the nature of psychological functioning was stressed. He understood social categories as dynamic and continuously changing depending on the situation, time points, and relevant other social categories. Individual and social significance of group membership varies constantly as Tajfel pointed out: “therefore, an individual’s affiliations with a group and the functional relevance of social comparison [...], even with the same group, enter into a continuously changing dynamic relationship” (Tajfel, 1982, p. 15). Nevertheless *change* has been a long neglected topic in social psychology. In recent years the studies of growth and development as well as longitudinal design have increased in psychology. This trend led to a further improvement of statistical methods for analysis of repeated measures (i.e., Singer & Willet, 2003). These techniques for longitudinal data analysis are widely used, for example, in developmental psychology (Nesselroade & Baltes, 1979; Singer & Willet, 2003). Adopting these methods, time

and change should also be the focus of social psychological research. This is especially important when dealing with an on-going merger and complicated processes that occur over several month or even years (Cartwright & Schoenberg, 2006; Citera & Rentsch, 1993). Here it is particularly indicated to take into consideration developmental and change processes and a research design that accounts for these aspects.

4.2.2 Change throughout the merger process

Seo and Hill (2005), building up on Buono and Bowditch (1989), proposed a stage model to describe psychological processes throughout a merger. This theoretical framework classified stages throughout the merger process and described the procedural nature of a merger. The authors integrated different psychological theories concerning mergers into one model and outlined when and how problem sources may emerge and can be explained as the merged organisation goes through stages of integration. They summarised four integration stages of merger and acquisitions: (1) premerger, (2) initial planning and formal combination, (3) operational combination, and (4) stabilization stages. Additionally, they specify six underlying theories: (1) anxiety theory, (2) social identity theory, (3) organisational justice theory, (4) acculturation theory, (5) job characteristic theory, and (6) role conflict theory. They further argued that constructs derived from SIT are especially useful to predict possible stressors like loss of identity and intergroup conflict during the operational combination stage. However, they further stated that the effects of those predictions decrease at a later stage of the merger (e.g., stabilisation stage). These theoretical assumptions have not been empirically tested so far. Nonetheless, they are particularly important because the theoretical framework points to the procedural nature of mergers and the possibility that predictors are not equally strong and stable within a dynamic change process. Shifting levels of dynamic variables over time serve as indicators of change processes. *Time* is then an essential variable determining patterns of when and how specific psychological factors predict change during a merger (Arrow, Poole, Henry, Wheelan, & Moreland, 2004; see also Zaheer et al., 1999, chapter 2).

4.2.3 Specificity of post-merger identification

It is assumed that the goal of a successful merger is that the new organisation serves as the basic source for identification and that members are encouraged to dis-identify with the previous organisation and to re-identify with the new one. To note, mergers are not always implemented in a way that pre-merger organisations are fully

abandoned. Different degrees of collaboration like joint departments, mergers with federal structure, or with unitary structure (e.g., Harman & Harman, 2003, and section 1.2) involve different degrees of threat and challenge to pre-merger identification (see research on foci of identification, van Knippenberg & van Schie, 2000). For the purpose of this study and in line with the merger at hand, I focus on a merger with a unitary structure in which the pre-merger organisations are mainly dissolved.

Ethier and Deaux (1994) stated that for successfully maintaining an identity in a new environment, a person must develop a new ground for supporting that identity while detaching from the old environment. With the announcement of a merger two identification related processes set off. Firstly, organisational change triggers salient social categories and increases the salience of pre-merger identification (Giessner, 2003). Secondly, especially in the case of a take over, organisational members have to dis-identify with the pre-merger organisation (Chreim, 2002) since it is dissolved. These seemingly contradicting processes can lead to resistance towards the merger which is often expressed by refusal to re-identify with the new merger organisation. Experimental (e.g., van Leeuwen et al., 2003) and field studies in organisations (e.g., Boen, Vanbeselaere, Hollants, & Feys, 2005; Terry, Carey, & Callan, 2001; van Knippenberg et al., 2002) have shown that individuals' identification with the merged group is significantly lower than their identification with their pre-merger group. This resistance and psychological disengagement from the new organisation after a merger impedes the positive effect of organisational identification. Assuming a relatively slow development of the merger process and adjustment to a merger (Citera & Rentsch, 1993), it is expected that post-merger identification increases relatively little over time.

Previous research found that members of the low-status or subordinate⁴ merger organisation express a more negative response and accordingly show less identification with the new merged group than members of the high status or dominant organisation (Terry & Callan, 1998; Terry et al., 2001; Terry & O'Brien, 2001; van Knippenberg et al., 2002). I, therefore, expect to replicate this effect of organisational dominance on

⁴ In the social identity approach, the relationship between groups is typically discussed in terms of group status rather than dominance. Status is linked to identification processes (Ellemers, 1993) and research in the context of mergers has shown that status perception has an impact on ingroup bias (e.g., Terry & O'Brien, 2001) and identification (e.g., Boen et al., 2006). Status and dominance are essentially related concepts but might be independent to some extent (van Knippenberg et al., 2002). On the one hand, the partner of higher pre-merger status is mostly the dominant merger partner. However, organisational dominance is a more specific term and more closely related to power than status. In the context of a merger organisational dominance describes power relations within the merger. Status is more strongly connected to the comparison between the groups before the merger. In the following I use the term dominance rather than status or power (see also van Knippenberg et al., 2002).

post-merger identification and assume that post-merger identification is higher for members of the dominant merger partner (students from university) than for members of the subordinate merger partner (students from the polytechnic).

Despite these expected mean level changes in the outcome variable, the main focus of the present chapter is on the prediction of changes in post-merger identification. Three predictors are defined and assumptions concerning their predictive effect, the role of organisational dominance, and the role of time are formulated.

4.2.4 Pre-merger identification

Regarding the relation between pre- and post-merger identification the merger literature from an intergroup perspective proposes two competing assumptions inferred from the SIA. Firstly, if the newly merged organisation is perceived as a partial continuation of the former and organisational identification can be transferred, this will lead to a positive relationship between pre- and post-merger identification (Bartels et al., 2006; Boen et al., 2005; Rousseau, 1998; van Knippenberg et al., 2002; van Leeuwen, 2001). Secondly, if the merger is perceived as a threat to identity (Branscombe, Ellemers, Spears, & Doosje, 1999) and as a discontinuation of the pre-merger organisation, then the consequence will be a negative (or zero) relationship between pre- and post-merger identification (Bartels et al., 2006). What is then of special interest is investigating the interplay of continuity and discontinuity and the conditions under which we expect a perception of continuity rather than of discontinuity.

Van Knippenberg et al. (2002) hypothesised that it is mainly the organisational dominance within the merger process implying (dis-)continuation. The dominant merger partner will be more influential in determining and defining features, norms, and values of the newly merged organisation relative to the former pre-merger organisation. Thus, the dominant merger partner will show a stronger sense of continuity that will be expressed in a positive correlation between pre- and post-merger identification. The subordinate merger partner is assumed to experience the merger as more threatening. Features of the previous organisation are not apparent any longer and the newly merged organisation is defined according to the rules of the dominant merger partner. For members of the subordinate organisation it is difficult to incorporate aspects of their former organisational identity in the new organisation. They are not expected to show a positive relationship between pre- and post-merger organisational identification.

Therefore, I suppose that pre-merger identification is only a significant and positive predictor for post-merger identification for members of the dominant organisation.

What has not been investigated until now is whether this relation and the assumed transformation of pre-merger identification on post-merger identification stays stable throughout the merger process. It can be assumed that perceptions of continuity and threat change as the merger process develops. Imagine that the dominant merger partner expects to take over the other organisation. As the merger process evolves, they realise that the subordinate group also influences and shapes the new organisation. Hence, they perceive the newly merged organisation no longer as a continuation but rather as a threat and pre-merger identification should not be predictive for post-merger identification. Over time the psychological process that drives a positive relationship between pre-merger and post-merger identification diminishes. It holds only true if the perception that aspects of the pre-merger organisation are transported to the post-merger organisation remains unchanged. If this perception changes, I expect the effect of pre-merger identification on post-merger identification to vary and to wear off over time.

4.2.5 Ingroup typicality

It was argued above that perception of continuity implicitly influences post-merger identification. Perceived continuity of the pre-merger group to the post-merger group implies that the former ingroup is seen as typical for the newly merged organisation. Mostly the dominant merger partner will be perceived as typical whereas the subordinate partner will be perceived as rather atypical or deviant from the shared post-merger group (van Leeuwen et al., 2003). The conceptualisation of continuity is similar to the notion of ingroup typicality, which describes the perception of fit of the ingroup for a superordinate category (Mummendey & Wenzel, 1999). Although sometimes labelled differently (e.g., *ingroup representation*, Boen, Vanbeselaere, Brebels, Huybens, & Millet, in press; or *sense of continuity*, Bartels et al., 2006) ingroup typicality has been found to influence post-merger organisational identification in various merger studies (e.g. Boen et al., 2005; in press; van Dick, Ullrich, & Tissington, 2006; van Leeuwen et al., 2003). More general, research on self-prototypicality (Eisenbeiss & Otten, 2005; Kashima, Kashima, & Hardie, 2000; Reid & Hogg, 2005) and group-prototypicality (Vossen, 2006) showed that perceived prototypicality predicts identification. Hogg and Reid (2001) stated: “when group membership becomes salient, people are highly sensitive to prototypicality, as it is the basis of perception and evaluation of the self and other group members” (p.186). In a

similar vain I expect that ingroup typicality is positively related to post-merger identification: if the ingroup fits well into a (positively) evaluated inclusive category, participants are more likely to identify with the inclusive category. Norms and standards of the superordinate category and the ingroup are then perceived as relatively congruent and organisational members are likely to identify with this category. Moreover, in line with previous reasoning, I assume a moderational effect of ingroup typicality on the previously postulated effect of pre-merger identification on post-merger identification (Boen, Vanbeselaere, & Cool, 2006). For members of the dominant organisation who are highly identified with the pre-merger organisation the expected effect for higher post-merger identification holds especially when ingroup typicality is high. If ingroup typicality refers to the extent to which characteristics of the new merger group are perceived as corresponding to the characteristics of the pre-merger ingroup, group members perceive a continuation that influences the transfer of pre-merger identification to post-merger identification (Boen et al., 2006; van Leeuwen et al., 2003).

It is expected that the effect of ingroup typicality on post-merger identification as a predictor variable is rather stable over time. Although the perception of being rather typical or untypical could change (implying a mean level change), there is no reason to assume that the psychological effect of typicality on post-merger identification changes over time.

4.2.6 Perceived fairness in the merger process

I suppose that pre-merger identification and ingroup typicality are predictors for post-merger identification. Additionally to variables explicitly derived from the SIA, it is assumed that perception of fairness in the merger process is an important predictor for post-merger identification. Perception of fairness taps into beliefs about how resources and outcomes are redistributed within the newly merged organisation (*distributive justice*) and how organisational members are treated and the change is implemented (*procedural justice*) within the new merged entity (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Lipponen et al., 2004). Little research has been conducted on the effect of justice or perceived fairness in a merger context (Amiot et al., 2006; Citera & Stuhlmacher, 2001; Lipponen et al., 2004; Meyer, 2001; Tyler & De Cremer, 2005), although the literature stresses the importance of fairness in the merger implementation process (e.g., Citera & Rentsch, 1993; Citera & Stuhlmacher, 2001).

Justice perception is one of the key concepts in the *group engagement model* proposed by Tyler and Blader (2003). In line with the SIA, they stress that it is mostly the development and maintenance of a favourable identity that influences cooperative behaviour. In turn, identity depends on the evaluation of procedural fairness experienced in the group. That is, perceived fairness transmits identity-relevant information about the quality of one's relationship to the rest of the group. Fair procedures and treatment indicate a positive, respectful position within the group and promote pride in the group membership (Amiot et al., 2006). The justice motive is related to an inclusive social identity (Platow, Wenzel, & Nollan, 2003). More specifically, the perception of fairness during a merger was found to influence organisational identification with the new merged group and adjustment to a merger (e.g. Amiot et al., 2006; Lipponen et al., 2004; Meyer, 2001; Tyler & De Cremer, 2005). I expect to replicate these results and suppose a positive effect of perceived fairness on post-merger identification.

Previous research has shown that perceived legitimacy (often defined as the perception of a deserved outcome of a just procedure, see Giessner et al., 2006) differs throughout a merger process for high and low status groups (e.g., Terry & O'Brien, 2001) or dominant and subordinate merger partners respectively. I expect to replicate this finding and assume that the subordinate merger partner perceives the merger to be less fair than the dominant group.

In addition to the differences for dominant and subordinate merger partners, it is expected that perception of fairness varies on a mean level according to actual implementation and contextual changes throughout the merger process. If for example members of the dominant group have the impression that they are "dragged down" (e.g., Hornsey, van Leeuwen, & van Santen, 2003) by the subordinate merger partner, perception of fairness may decrease because certain expectations are not met. It is assumed that despite mean level changes, the predictive effect of fairness on post-merger identification should be stable.

To summarise, concerning the first research question it is assumed that post-merger identification is higher for members of the dominant merger partner. For both organisations it is assumed that post-merger identification increases slowly over time. Regarding the second research question, it is assumed that pre-merger identification positively predicts post-merger identification only for members of the dominant organisation. Ingroup typicality and perceived fairness are assumed to positively

influence post-merger identification. Additionally, I suppose that the effect of pre-merger identification and organisational dominance on post-merger organisation is further influenced by ingroup typicality. The effect of pre-merger identification could possibly wear off over time. Such effect dissipation is not expected for ingroup typicality and perceived fairness.

4.3 Method

4.3.1 Participants

A total of 466 respondents completed the first questionnaire and 309 agreed to give their e-mail address. 314 completed the second questionnaire, and 378⁵ completed the third one. A total of 157 completed all three questionnaires (33% response rate in reference to Time 1). Those who completed the questionnaire at Time 1, Time 2, and Time 3 were aged between 20 and 34 years ($M = 24.5$, $SD = 2.4$). 50.6% of the participants were female and 49.4% male. The sample consisted of 78 students from the former university and 79 students from the former polytechnic. Preliminary analyses indicated that the two groups differed in terms of age, $t(157) = 4.61$, $p = .05$ and gender, $\chi^2(1, N = 157) = 8.32$, $p = .004$. Participants from the former polytechnic were slightly older ($M = 25.37$, $SD = 1.97$) than participants from the former university ($M = 23.63$, $SD = 2.5$). At the former polytechnic 39% females and 61% males participated and at the former university 62% females and 38% males. Participants were enrolled in Economics (polytechnic) or Economics and Social Science (university). Despite the slight differences in the distribution of gender and age in the two samples, age and gender included as control variables did not reveal any differences and were, therefore, not included for further analyses. In the merger at hand, the university was bigger in size (app. 7000 students) than the polytechnic (app. 4000 students) suggesting more influence in the merger process. The name of the newly merged organisation equalled the name of the university. Additionally, I asked for dominance perception ("Which group has the stronger influence on the merger process?" ranging from 1 = polytechnic to 7 = university). The perception of dominance differed between students of the polytechnic ($M = 5.66$, $SD = 1.13$) and students from the university ($M = 5.14$, $SD = 1.08$), $t(154) = 2.90$, $p = .004$. However, in both organisations members perceived the university to be the stronger merger partner.

⁵ The increase in participants is due to wide recruitment of participants via e-mails, mailing lists, and an internet platform that attracted also some people who did not participate earlier.

4.3.2 Design and procedure

Four month after the official merger took place, the first questionnaire was distributed to economics students enrolled in the two former institutions. The second questionnaire was distributed six month later and the third after one year. For the first data collection, a self-administered questionnaire was handed out to students in both organisations during lectures. Lecturers were asked beforehand for permission and announced the data collection. Participation was fully voluntary and not required for course work. Participants were informed that the questionnaires were designed to give them an opportunity to express their opinions about a range of issues associated with the merger. All participants were informed that their responses were anonymous and would not be made available to university personnel at any time. At Time 1 participants were asked to indicate their email addresses on a separate sheet of paper for sending out the second and third questionnaire via e-mail. The email addresses were at no point stored with the completed questionnaires. At Time 2 and Time 3 a link to an online self-administered questionnaire was sent to those participants who had provided their e-mail address. In addition, the survey was announced via a mailing list including all economics students of the former polytechnic and on an electronic platform used by 80% of the former university's students. After completion of the Time 1 and Time 2 questionnaire participants took part in a lottery for compensation and after completing the third wave of data collection all remaining participants received 5 Euro (for single participation), 10 Euro (for twofold participation), or 15 Euro (for threefold participation) vouchers for compensation.

4.3.3 Measures

With the exception of the ingroup typicality measure, all measures were multi-item scales. Responses were assessed on rating-scales ranging from 1 (*strong disagreement*) to 7 (*full agreement*) if not stated otherwise.

Identification. Post-merger organisational identification was assessed with four items adopted from Doosje, Ellemers, and Spears (1995), for example “I see myself as a member of [the new merged institution]”. Pre-merger identification was assessed with the same items, but referring to “my former institution” instead of the merged organisation. Cronbach's α at Time 1, 2, and 3 were .78, .73, and .82 for pre-merger identification and .92, .88, and .91 for post-merger identification.

Ingroup Typicality. One item measured typicality of the former ingroup (IG) IG and former outgroup (OG) on a 6-point scale (1=*not at all* to 6 =*very much*), e.g., “The students of my former IG are typical for students of the newly merged organisation.

Perceived Fairness. To assess the perceived fairness, the following three items adapted from Giessner et al. (2006) were used: “I think it is fair how students of my former institution come off well in the merger process” “I think it is fair how students of the former other institution come off in the merger process” “The momentary starting position of both groups is legitimate”, Cronbach’s α at Time 1, 2, and 3 were .70, .80, and .87.

4.3.4 Analyses

I first analysed changes in mean levels for all four variables at the three time points for dominant and subordinate merger partners. This analysis should describe mean level changes over time and differences due to organisational membership as well as an interactional effect of time and organisational membership both for the outcome variable but also for the predictor variables. The main tasks were to investigate changes of the outcome variable and to figure out which and how predictors influence post-merger identification over time. Therefore, I applied a multilevel model for change (or multilevel random coefficient modelling, MRCM) using HLM 6 (Raudenbush, Bryk, & Congdon, 2004).

I use a multilevel approach because longitudinal data can be viewed as multilevel data with repeated measures nested within persons (Hox, 2002). If longitudinal data is viewed as multilevel data, the resulting hierarchical model accounts for the dependency that subjects have been assessed repeatedly. Different from multiple regressions, *Time* can be explicitly incorporated as a factor. Additionally, different from analysing changes with (M)ANOVA’s, multilevel models of change allow for the inclusion of multiple covariates (Hox & Stoel, 2005; Plewis, 2001). That is, I am able to assess the effect of *Time* on the outcome variable as well as the effect of time-varying and time-invariant predictors. Because a multilevel model of change approach relies on person-period data sets, each predictor can, if appropriate, take on a specific value for each measurement occasion (time-varying). The values of time-invariant predictors are constant across the multiple records of a person-period data set (Singer & Willet, 2003).

Conceptually, a multilevel model of change allegorises multiple nested regression analyses where the coefficient of one level is the outcome of the next level. In a multilevel model with longitudinal data, the first level (Level 1) includes all

observations over n-points of measurement that are the repeated observations of each person. On the second level (Level 2), each person is only included once and individuals are the unit of analysis. The Level 1 model estimates the association between the outcome and Time, explicitly expressed as a factor and a stand-in variable for change. In addition to Time, several time-varying predictors are included in a Level 1 model. The Level 1 model accounts for intraindividual differences in the outcome variable. The Level 2 model can additionally include time-invariant variables, like in this case pre-merger organisational membership, and helps to specify individual differences in any statistical association at Level 1⁶.

4.4 Results

4.4.1 Panel attrition and comparison of participants

In order to test if the final sample consisting of all participants who completed the Time 1-Time 3 questionnaires ($N = 157$) differed from those who completed only the first and/ or second questionnaire, a multivariate analysis of variance (MANOVA) was used. Participants who completed only the first questionnaire ($N = 225$) were compared to those who completed all three questionnaires ($N = 157$) on the relevant Time 1 variables (i.e., organisational membership, pre-merger identification, post-merger identification, ingroup typicality, and perceived fairness). The results suggest systematic differences between samples on a multivariate level at Time 1, ($F(7, 368) = 2.49, p = .016, \eta^2 = .045$). Analysis on the univariate level showed that this effect was due to a significant difference on pre-merger identification at Time 1 ($F(1, 375) = 14.06, p = .001, \eta^2 = .030$). Participants who only completed the questionnaire at Time 1 identified less with the pre-merger organisation ($M = 5.04, SD = 1.21$) than those

⁶ At Level 1I expressed a linear change model as follows (Singer & Willet, 2003):

$$IDNew_{it} = \pi_{0i} + \pi_{1i} Time_{it} + e_{it} \quad (1)$$

In Equation 1 $IDNew_{it}$ represents the post-merger identification for individual i at time t . When Time 1 = 0 (Time coded as Time 1 = 0, Time 2 = 1, Time 3 = 2), the individual growth parameters are interpreted as followed: π_{0i} represents individual i level of post-merger identification at Time 1; π_{1i} represents individuals rate of change. The residual in Equation 1 e_{it} represents the portion of individual's post-merger identification at time t that is not predicted by Time.

The between-person portion of the multilevel model of change (Level 2) used the individual growth parameters from the within-person (Level 1) as outcomes and enables to determine whether individuals vary in their initial status, rate of change or acceleration and if so, what predicts variation.

$$\pi_{0i} = \beta_{00} + \beta_{01} Organisation_i + u_{0i} \quad (2)$$

$$\pi_{1i} = \beta_{10} + \beta_{11} Organisation_i + u_{1i} \quad (3)$$

The composite model tested is expressed as the following model:

$$IDNew_{it} = \beta_{00} + \beta_{01} Organisation_i + \beta_{10} Time_{it} + \beta_{11} Organisation_i * Time_{it} + (e_{it} + u_{0i} + u_{1i} * Time) \quad (4)$$

participants who completed all three questionnaires ($M = 5.43$, $SD = 0.92$). Likewise, the influence of drop-out between Time 2 and Time 3 on the model variables at Time 2 was tested. With a MANOVA I compared those who participated only at Time 2 ($N = 51$) and Time 1 & Time 2 ($N = 31$) with those who participated at all three time points ($N = 157$) on the model variables at Time 2. The MANOVA revealed no significant difference at the multivariate level at Time 2, $F(5, 230) = 0.85$, $p = .57$, $\eta^2 = .018$. The analysis further showed no significant differences on the measures at the univariate level. All following analyses were conducted using the Time 1-Time 3 sample in which only those participants were included who answered all three questionnaires. The seemingly systematic drop-out of participants after Time 1 will be discussed later.

4.4.2 Preliminary analysis: Changes of means over time

Before going into detail analysing changes of the outcome variable, I conducted a descriptive analysis of change both for the outcome as well as the predictor variables. Variables were subjected to a mixed-model analysis of variance (MANOVA) with Time as the within participants factor and organisational membership as a between-participants factor. The analysis showed a significant change over time, $F(8, 143) = 4.24$, $p = .001$; $\eta^2 = .19$. In addition, a significant effect of organisational membership was found, $F(4, 147) = 45.66$, $p = .001$; $\eta^2 = .55$, but no significant interaction of Time x Organisation, $F(8, 143) = 0.64$, $p = .73$; $\eta^2 = .03$. Table 1 displays results from the repeated measure ANOVAs including all means and standard deviations. *Time* (as the with-in factor) influenced pre- and post-merger identification, ingroup typicality, and perceived fairness. In addition, I found significant differences on mean level between members of the dominant and subordinate merger partner for post-merger identification, ingroup typicality, and perceived fairness.

Table 1. Means and standard deviation, and changes over time and differences between groups

	<u>Time 1</u>		<u>Time 2</u>		<u>Time 3</u>							
	Domt. <i>M (SD)</i>	Subord. <i>M (SD)</i>	Domt. <i>M (SD)</i>	Subord. <i>M (SD)</i>	Domt. <i>M (SD)</i>	Subord. <i>M (SD)</i>	F_{Time} (2, 152)	η^2	$F_{Orga..}$ (1, 155)	η^2	$F_{TimexOrg}$ <i>a.</i> (2, 152)	η^2
Post-merger identification	3.81 ^a (1.32)	3.27 ^a (1.52)	3.75 ^a (1.36)	3.16 ^a (1.33)	3.97 ^{ac} (1.41)	3.47 ^{ac} (1.38)	3.10*	.02	8.69***	.05	.11	<.01
Pre-merger identification	5.41 (0.86)	5.42 (0.97)	5.69 ^b (0.87)	5.66 ^b (1.09)	5.67 ^d (0.99)	5.61 ^d (1.13)	6.27**	.04	.041	>.01	.09	<.01
Ingroup typicality	2.87 ^{abd} (1.08)	4.32 ^{abd} (0.83)	2.55 ^{ab} (1.13)	4.20 ^{ab} (0.99)	2.58 ^{ad} (1.03)	4.10 ^{ad} (0.94)	3.90*	0.5	276.10***	.54	0.51	<.01
Perceived fairness	3.77 ^a (0.76)	3.42 ^a (1.11)	3.61 ^a (1.04)	3.25 ^a (1.14)	3.71 ^{ad} (1.09)	3.09 ^{ad} (0.98)	2.60 ⁺	.03	10.63***	.06	1.90	.01

Note. Domt.= dominant; Subord.=subordinate

^a significant difference between dominant vs. subordinate group

^b significant difference Time 1 compared with Time 2

^c significant difference Time 2 compared with Time 3

^d significant difference Time 3 compared with Time 1

+ p<.10, *p<.05, **p<.01, ***p<.005 (two-tailed test)

More specifically, post-merger identification demonstrated a significant quadratic change over time, $F(2, 152) = 4.47, p = .036, \eta^2 = .03$. *Post-merger identification* did not change from Time 1 to Time 2 but increased significantly from Time 2 to Time 3 for members of both organisations. Also pre-merger identification showed quadratic change over time $F(2, 152) = 5.02, p = .026, \eta^2 = .03$. *Pre-merger identification* increased from Time 1 to Time 2 and declines from Time 2 to Time 3. The effect of Time on ingroup typicality was linear suggesting that ingroup typicality decreases over time $F(1, 153) = 6.82, p = .01, \eta^2 = .04$. Ingroup typicality decreased from Time 1 to Time 2 but stayed stable from Time 2 to Time 3 for members of both organisations. The effect of Time on *perceived fairness* was linear suggesting a decrease of perceived fairness over time, $F(2, 152) = 2.60, p = .06, \eta^2 = .06$. In general, these preliminary analyses suggest a pattern of change that is similar for members of the dominant and subordinate organisation. Adjustment to a merger was so far not achieved, as indicated by an increase of pre-merger identification and a drop in ingroup typicality as well as perceived fairness both for the dominant and the subordinate merger partner. On mean level expected differences for members of the dominant and subordinate organisation suggested a slightly better adjustment for members of the dominant organisation. Yet, this approach is only useful to describe mean level changes but does not allow for inclusion of time-varying predictors and possible changes in correlations over time.

First hints that correlative patterns might change over time are found in the raw correlations as summarized in Table 2. The raw correlations at Time 1, Time 2, and Time 3 provide initial support that ingroup typicality and perceived fairness are related to post-merger identification. Ingroup typicality and perceived fairness were positively correlated as expected. Pre-merger identification across participants was not significantly correlated with post-merger identification. For pre-merger identification and ingroup typicality it seems that the correlation with post-merger identification changed over time. These interrelations between the outcome variable and its predictors will be further investigated.

Table 2. Cross-sectional correlations between variables at Time 1, Time 2, and Time 3 (N=157)

	Time 1				Time2				Time 3			
	1	2	3	4	1	2	3	4	1	2	3	4
1. Post-merger identification	-	.10	.39**	.49**	-	-.14	.13	.47**	-	-.03	.05	.49**
2. Pre-merger identification		-	-.01	-.12		-	-.03	-.10		-	-.03	-.08
3. Ingroup typicality			-	.41*			-	.21*			-	.25**
4. Perceived fairness				-				-				-

Note. *p<.05. **p<.01 (two-tailed test)

4.4.3 A multilevel model for change

To further analyse the nature of change in post-merger identification and to answer the question whether post-merger identification is influenced by pre-merger identification, ingroup typicality, perceived fairness, as well as Time, and organisational dominance, I applied a multilevel regression approach or a multilevel model of change to the data (Singer & Willet, 2003). In a multilevel model of change, Y_{it} is the dependent variable of individual i at time point t . The growth trajectories indicate how post-merger identification changes over the three points of measurement for individual i . It is further tested whether variance in change of post-merger identification is explained by time-varying predictors and organisational membership as a time-invariant factor. *Time* as a factor was included in a Level 1 model as well as the time-varying predictors. Pre-merger organisational membership was entered as a time-invariant predictor in the equation at Level 2.

4.4.3.1 A multilevel model for change of post-merger identification

The first column in Table 3 shows an unconditional means model (Model 1), which fits only an overall mean and allows for individual differences in mean level (Singer & Willet, 2003). The intercept indicates the average level of post-merger identification across time and was $b = 3.56$, $SE = 0.09$, $t(156) = 37.96$, and differs significantly from 0, $p < .001$. The intraclass correlation coefficient⁷ ρ suggests that 54% of the variance of changes in post-merger identification was attributable to differences among individuals. To test the assumption that post-merger identification slowly increases over time, I examined an unconditional growth model (Model 2) to which I added Time as a predictor to the Level 1 model. While the average participant had a non-zero level of post-merger identification, $b = 3.47$, $SE = 0.10$, $t(156) = 31.70$, $p < .001$ at Time = 0 (Time 1), the linear trend was not significant, $b = 0.09$, $SE = .05$, $t(156) = 1.50$, $p = .13$. To further test growth in post-merger identification, I controlled for quadratic effects of Time on post-identification by inputting the polynomial function of Time² in Model 3. Results showed that this parameter is significant, $b = 0.18$, $SE = .08$, $t(466) = 2.20$, $p = .028$, indicating a quadratic relationship between Time and post-merger identification. I further predicted a significant difference between members of

⁷ $\rho = \tau_{00} / \sigma^2 + \tau_{00}$. The coefficient measures the proportion of variance in the outcome that is between groups. It applies only to random-intercept models ($\tau_{11} = 0$).

the dominant and subordinate groups. Model 4 included organisational membership as a time-invariant covariate. The model suggests that the estimated post-merger identification for an average member from the dominant organisation is $b = 3.81$, $SE = .14$, $t(155) = 26.47$, $p < .001$. The estimated difference between members of the dominant and subordinate university was $b = -.56$, $SE = .18$, $t(155) = -3.05$, $p = .003$, suggesting that on average members of the subordinate organisation identified less with the post-merger organisation. In addition, it was investigated how organisational membership affects were effected by Time and Time². As summarised in Model 5 (see Table 3) these effects were not significant. Thus, to answer the first research question, average change in post-merger identification was quadratic and was on a mean level lower for members of the subordinate organisation than for members of the dominant organisation. Yet, the pattern of change is parallel for members of the dominant and subordinate organisation. In the next steps, I move towards predicting further variability as a function of the time-varying and time-invariant predictors to better understand the developmental process of post-merger identification.

Table 3. Estimates of fixed and random effects from a series of multilevel models of change with pre-merger identification, ingroup typicality, and perceived fairness as time-varying predictors (N=156)

	Parameter Estimation (SE)								
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Fixed effects									
Intercept	3.56*** (0.09)	3.47*** (0.09)	3.53*** (0.10)	3.81*** (0.14)	3.75*** (0.15)	3.85*** (0.13)	3.95*** (0.18)	3.63** (0.12)	3.84** (0.15)
Time		0.09 (0.06)	-0.27 (0.18)	-0.28 (0.18)	-0.20 (0.22)	-0.28 (0.18)	-0.15 (0.25)	-0.14 (0.18)	-0.17 (0.18)
Time ²			0.18** (0.08)	0.18* (0.08)	0.14 (0.10)	0.18* (0.08)	0.07 (0.11)	0.14+ (0.08)	0.15+ (0.08)
Organisation (Orga.)				-0.56** (0.18)	-0.55** (0.21)	-0.60** (0.19)	-0.53** (0.23)	-0.34* (0.15)	-0.50 (0.18)
Time x Orga.					-0.12 (0.36)				
Time ² x Orga.					-0.07 (0.16)				
Pre-merger identification (id.)						0.40** (0.14)			0.55*** (0.11)
Pre-merger id. x Orga.						-0.67** (0.19)			-0.75** (0.25)
Pre-merger id x Time						-0.77* (0.31)			-0.86* (0.27)
Pre-merger id. x Time ²						0.32** (0.14)			0.35* (0.13)
Pre-merger id. x Time x Orga.						1.10** (0.40)			0.93 (0.53)
Pre-merger id. x Time ² x Orga.						-0.44* (0.18)			-0.35 (0.23)
Typicality							0.08 (0.14)		-0.19** (0.88)
Typicality x Orga.							-0.50**		0.23**

Typicality x Time							(0.22)		(0.23)
							0.16		
Typicality x Time ²							(0.14)		
							-0.31		
Typicality x Time x Orga.							(0.30)		
							-0.18		
Typicality x Time ² x Orga.							(0.20)		
							0.08		
							(0.43)		
Perceived Fairness								0.58***	0.62***
								(0.08)	(0.08)
Fairness x Time								0.26 ⁺	-0.36**
								(0.14)	(0.13)
Fairness x Time ²								0.11 ⁺	0.16**
								(0.06)	(0.06)
Random Effects									
Level-1 residual variance (r)	0.92	0.73	0.71	0.71	0.71	0.69	0.68	0.73	0.69
Level-2 residual variance									
Growth rate, u ₀	1.08	1.29	1.30	1.23	1.22	1.08	1.07	0.75	0.63
Time, u ₁		0.19**	0.19**	0.19***	0.20***	0.19*	0.16**	0.09*	0.08*
Time ² , u ₂									
Deviance	1527.17	1517.71	1512.96	1512.80	1511.23	1488.67	1477.56	1433.20	1401.22
	(df=3)	(df=6)	(df=7)	(df=8)	(df=10)	(df=14)	(df=14)	(df=11)	(df=19)

Note. Model 1 is an unconditional means model. Model 2 and 3 are unconditional growth models. Model 4 and 5 control for the effect of the time-invariant predictor organisational dominance. Model 6 builds on Model 4 by adding the main effect of pre-merger identification as well as pre-merger identification x Time and pre-merger identification x Time² interactions. Model 7 builds on Model 4 and adds the main effect of typicality as well as the typicality x Time and typicality x Time² interactions. Model 8 builds on Model 4 by adding the main effect of perceived fairness and the interaction effect with Time and Time². Model 9 is the final model examining simultaneous effects of time-varying and time-invariant predictors.

The random effect for Time² was set zero, because I have only three points of measurement and three coefficients to estimate: HLM does not allow estimating such a model. Therefore, I restricted the random effect of Time² to be zero. Snijders (1996) argues that when working with higher order polynomials, the higher order terms are often constant or fixed. However, I tested another model where I restricted the random effect for Time to be zero and freely estimated the random effect for Time²; the random effect was 0.02 and not significant, indicating that this residual variance is not reliably estimated and I can restrict it to zero for the following analysis (e.g., Nezlek, 2001; Schnabel, 1998). Full Maximum Likelihood Estimation (FML) was used. Organisation was dummy coded (dominant =0, subordinate =1). Time was coded Time 1=0, Time 2=1, Time 3=2; Level 1 predictors entered in Model 6-9 are grand-mean centred. ⁺p<.10, *p<.05; **p<.01; ***p<.001.

4.4.3.2 Predicting post-merger identification

In the following, I present results to answer the second research question. The substantive question behind the following analysis was, whether trajectories of post-merger identification vary over time as a function of the proposed predictors, and whether the magnitude of this relation depends on participants belonging to the dominant or subordinate merger organisation. I examined a series of consecutive models to firstly explore the main effects of the predictors on post-merger identification and secondly to control for interaction effects with Time and Time². Additionally, if indicated, I control for moderational effects of organisational membership. Following the procedure used by Pan et al. (2005) Model 6 through 9 in Table 3 presents a taxonomy investigating the relationship between time-varying predictors and post-merger identification. Time-varying predictors or covariates are normally specified as fixed or constant at Level 2 (Raudenbush & Bryk, 2002). Time-variant predictors require the assumption of no Level 2 residuals, because they have no within-person variation to allow for Level 2 residuals (Singer & Willet, 2003). Still, according to my assumptions of different effects for members of the dominant and subordinate organisation, we expect non-random variation due to organisational membership. It was predicted that pre-merger identification should only be related to post-merger identification for members of the dominant organisation and that the effect of ingroup typicality would influence the stated relationship between pre-merger identification and organisation on post-merger identification. That is, the coefficient for pre-merger identification and the interaction for pre-merger identification and ingroup typicality were allowed to vary across members of the two organisations. The three predictor variables were grand mean centred for all analyses.

I tested a model that included pre-merger identification and in a second step organisational membership (models not shown here). The main effect of pre-merger identification was virtually zero, $b = .004$, $SE = .10$, $t(463) = 0.04$, $p > .50$. After inclusion of organisational membership, the main effect was, $b = .17$, $SE = .10$, $t(463) = 1.74$, $p = .081$, and the interaction effect of pre-merger identification and organisation on post-merger identification, $b = -.29$, $SE = .19$, $t(462) = -2.4$, $p = .130$. Although neither the main effect nor the interaction with organisational membership was significant, the direction of the effect suggests that for members of the dominant organisation changes in post-merger identification are positively related to pre-merger

identification. However, for the members of the subordinate organisation this relationship was reversed so that changes in pre-merger identification were negatively related to changes in post-merger identification. However, in line with previous reasoning, it seems that pre-merger identification is not a significant predictor for post-merger identification across time points. Therefore, I further tested whether the effect of pre-merger identification had both an effect on linear and quadratic growth. The inclusion of the three-way interaction of pre-merger identification, organisational dominance and Time did not yield a significant effect, $b = .19$, $SE = .15$, $t(460) = 1.32$, $p = .18$ (model not shown). The effect of pre-merger identification, organisational dominance, and Time² was significant as shown in Model 6. Analysis of the simple trajectories⁸ (see Curran, Bauer, & Willoughby, 2006) revealed that the pre-merger identification and interaction with Time, $b = -0.77$, $p < .05$ and Time², $b = 0.32$, $p < .01$ was only significant for members of the dominant group. Yet, for members of the subordinate group for it was not significant, $b = -0.12$, $p > .05$ for pre-merger identification and Time, and $b = 0.09$, $p > .05$ for pre-merger identification and Time². Results indicate that for members of the dominant merger organisation at Time 1, pre-merger identification was positively related to post-merger organisation suggesting that if participants identify strongly with the pre-merger organisation they tend to identify with the post-merger organisation. Yet, at Time 2 and Time 3 this effect wore off. At Time 2 and Time 3 organisational members with different values in pre-merger identification did not differ in values of post-merger identification. Pre-merger identification had no effect on post-merger identification for members of the subordinate organisation across time. Figure 1 and Figure 2 present prototypical change trajectories based on Model 6 to demonstrate the findings for members of the dominant and subordinate organisation.

⁸ Aiken & West (1991) definition of a simple slope as a conditional relation between a predictor and a criterion at a given value of a second predictor is transferable to HLM models, then named simple trajectory. A simple trajectory refers to a conditional relation between the repeated dependent measure and time (or another predictor) at a given value of a second predictor (Curran et al., 2006).

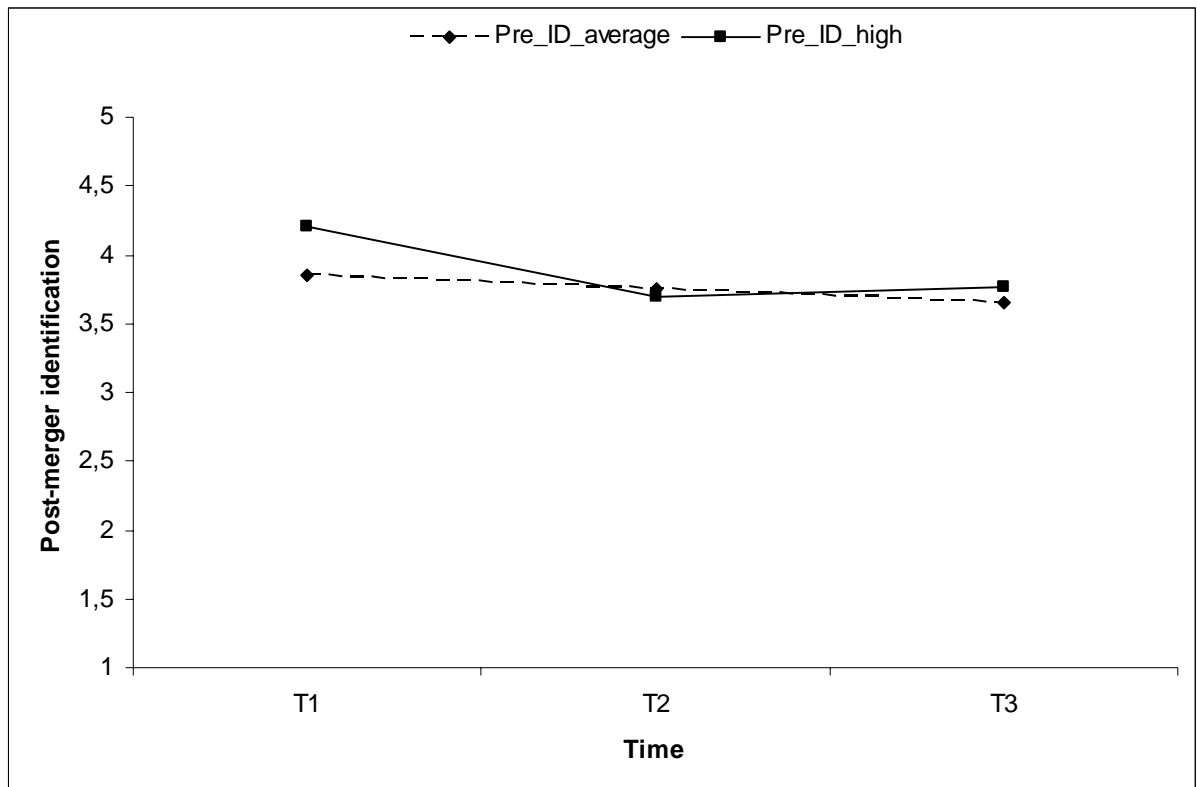


Figure 1. Effects of pre-merger identification and time on post-merger identification for members of the dominant organisation.

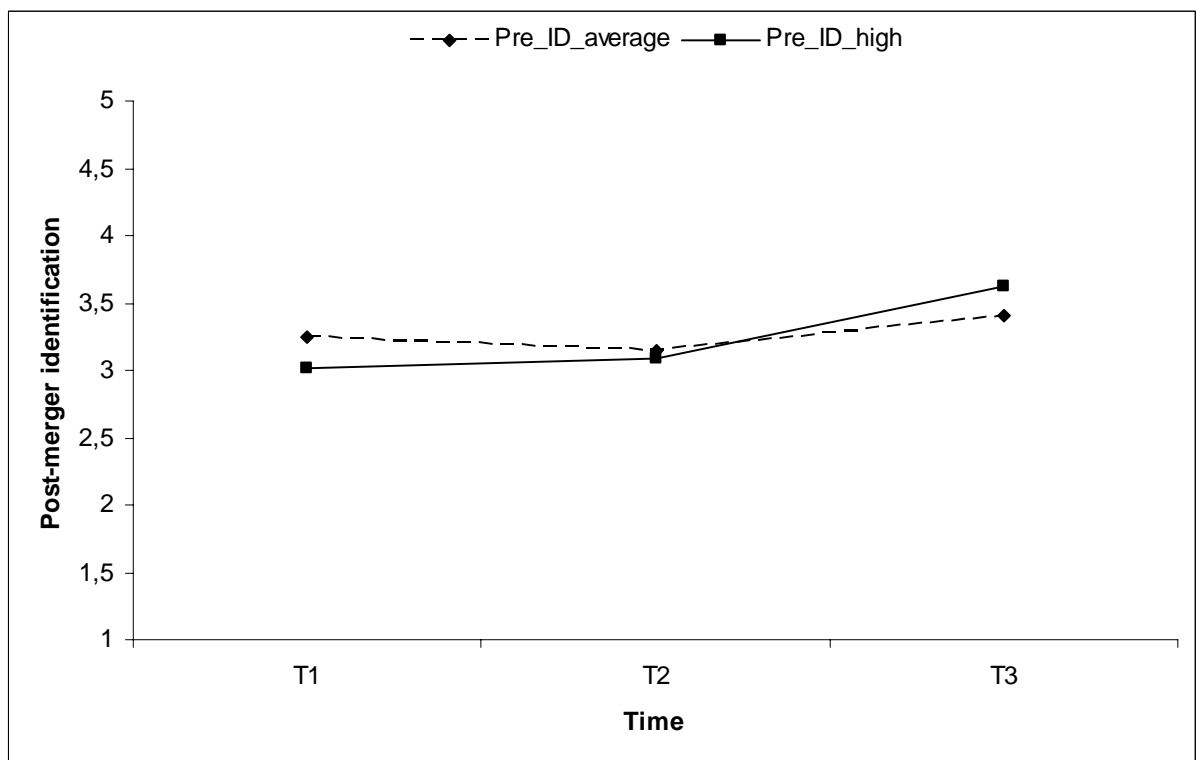


Figure 2. Effects of pre-merger identification and time on post-merger identification for members of the subordinate organisation.

The following models (models not shown in Table 2) tested the main effect of typicality, $b = -.12$, $SE = .07$, $t(461) = -1.60$, $p = .11$, and additionally an interaction of typicality and organisational membership, $b = .29$, $SE = .12$, $t(461) = 2.45$, $p = .002$. Resolving the simple trajectories (Curran et al., 2006) revealed that typicality was positively related to post-merger identification for members of the subordinate organisation ($b = 0.11$, $p = .48$) and negatively related to post-merger identification for members of the dominant organisation ($b = -0.12$, $p = .12$). However, both simple trajectories did not reach significance.

I further assumed a three-way interaction of pre-merger identification, organisational dominance, and typicality. After first controlling for the two-way interaction of pre-merger identification and typicality that was non-significant, $b = .03$, $SE = .13$, $t(456) = -0.31$, $p = .75$, also the predicted three-way interaction did not reveal a significant effect, $b = .19$, $SE = .14$, $t(456) = 1.37$, $p = .17$. According to these results the subsequent model (models not shown in Table 3) included the effect of typicality and the interaction with organisational membership plus the time-varying effects of typicality. The included cross-product of typicality \times Time was significant, $b = -0.05$, $SE = .01$, $t(460) = -2.23$, $p = .03$. The tested effect for quadratic change did reveal a marginal significant result, $b = -.26$, $SE = .15$, $t(459) = -1.76$, $p = .08$. After controlling for organisational membership, none of the time-varying effects remained significant (Model 7).

I tested for the time-varying effect of perceived fairness. Indeed, the main effect of perceived fairness was significant and suggests that perceived fairness is positively related to post-merger identification, $b = .50$, $SE = .05$, $t(464) = 9.24$, $p < .001$. Within each time point, some variance in post-merger identification is due to perceived fairness. The effect of perceived fairness was, as expected, not influenced by organisational membership, $b = -.023$, $SE = .11$, $t(464) = -0.21$, $p = .83$ and perceived fairness had no effect on linear change in post-merger identification, $b = -.026$, $SE = .04$, $t(464) = -0.64$, $p = .53$. After inclusion of the quadratic effect in a subsequent model (Model 8), the interactional effects of perceived fairness and Time, $b = -.26$, $SE = .14$, $t(464) = -1.79$, $p = .073$ as well as Time², $b = .11$, $SE = .06$, $t(464) = 1.74$, $p = .08$, were marginally significant suggesting that the effect of perceived fairness on post-merger identification gets more pronounced over time.

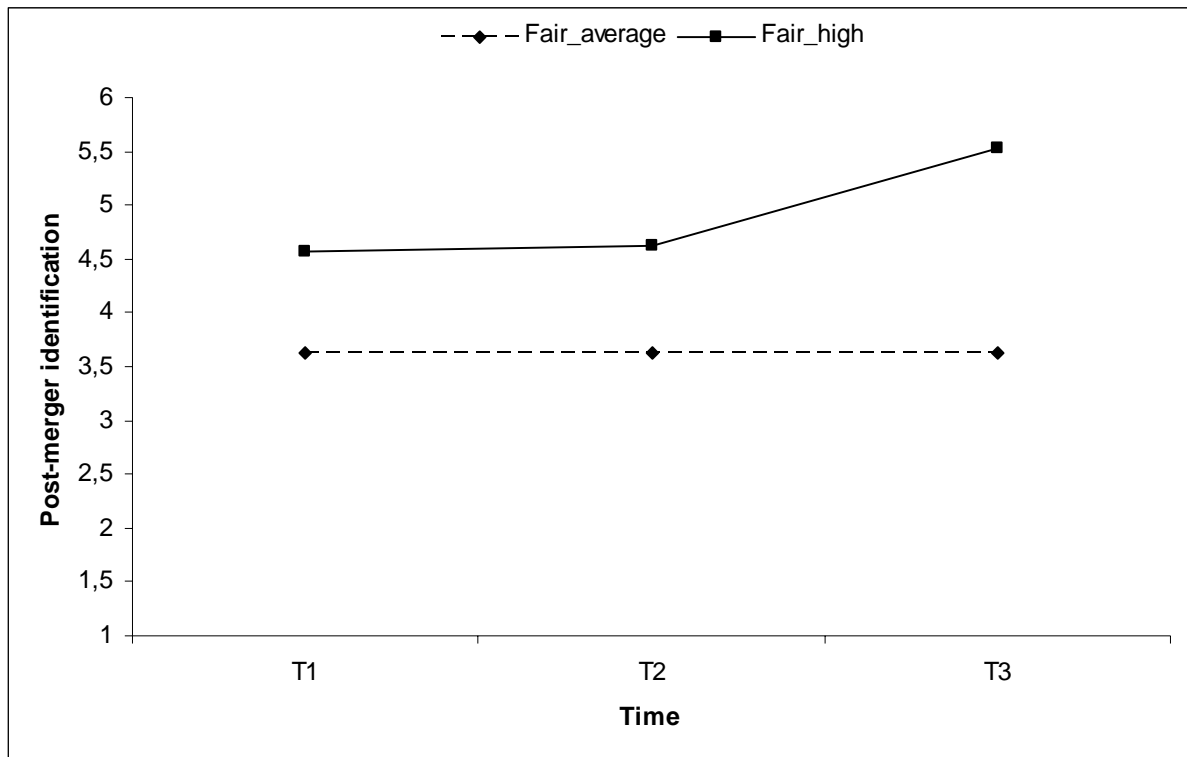


Figure 3. Effects of perceived fairness and time on post-merger identification across members of both organisations.

Finally, pre-merger identification, ingroup typicality, and perceived fairness and the moderation terms were included in a model to investigate their simultaneous effects. All predictors remained significant with the exception of the effect pre-merger identification and organisational membership on linear and quadratic changes (see Model 9).

In sum, the results of this study demonstrate considerable variability in change of post-merger identification over time among members of the dominant and subordinate organisation. In addition to the expected effect of time as a proxy of change within the merger process, pre-merger identification, typicality, and perceived fairness helped to explain observed variability. However, only the effect of pre-merger identification changed significantly over time depending also on organisational membership. Additionally, a marginally significant effect of Time/Time² and perceived fairness on post-merger identification was found.

4.5 Discussion

4.5.1 Change in post-merger identification and its predictors

In the present chapter I examined longitudinal effects on post-merger identification and extended previous research by focusing on dynamics of change in identification processes. Based mainly on an intergroup perspective on organisational mergers (Terry & Hogg, 2001), I stated two research questions. I firstly asked for the patterns of change in post-merger identification and possible differences due to membership in the dominant or subordinate organisation. Secondly, I raised the question whether post-merger identification is over time related to pre-merger identification, ingroup typicality, and perceived fairness. At all three points of measurement, post-merger identification was relatively low and the pattern of change was quadratic instead of linear. That is, identification with the newly merged organisation does not change significantly from Time 1 to Time 2 but increases from Time 2 to Time 3. This pattern applies to both, members of the subordinate and dominant organisation. As expected, pre-merger identification was only a positive significant predictor for members of the dominant organisation. Additionally, this was only the case at Time 1 but not at Time 2 and Time 3. This supports the assumption that the predictive effect of pre-merger identification dissipates over time. Assumptions about effects of ingroup typicality on post-merger identification were not confirmed. Contrary to my assumptions, I did not find a significant three-way interaction of pre-merger identification, organisational dominance, and ingroup typicality. The analysis revealed a two-way interaction of ingroup typicality and organisational dominance but none of the resolved simple trajectories was significant. Further, the effect of ingroup typicality remained unchanged when including Time or Time². In line with assumptions, perceived fairness positively predicted post-merger identification and this effect did marginally change over time in the sense that the positive relation between perceived fairness and post-merger identification amplified.

If one defines identification with the newly merged organisation as a marker for adjustment to the merger, these results indicate that adjustment is difficult to achieve, develops slowly, and depends on contextual factors. The field situation as described above, suggests that at Time 1 participants did not experience much change but also did not know what to expect. At Time 2 after first changes like synchronised semester times were implemented, participants of both organisations tended to hold on to their pre-

merger organisation and refused to identify with the post-merger organisation. At Time 3, one year after the merger was launched I observed a slight increase in post-merger identification indicating a first sign of adjustment. Despite the slow development that was predicted, the growth model showed that identification did not change linear but quadratic. Although I did not predict the non-linear change in identification, the result is not surprising given the fact that many motivational and behavioural processes exhibit differential rates of change (Cudek & Harring, 2007). The non-linear increase of post-merger identification points to the fact that change is not uniform over time. Change in post-merger identification is more likely to be faster in some periods and slower in others. Further research is needed to predict when change in identification follows a linear pattern and when it is rather non-linear.

Further, I aimed to understand variation in post-merger identification throughout a merger process by investigating several predictors of post-merger identification. I focused on the influence of pre-merger identification as a predictor. As assumed, the effect of pre-merger identification on changes in post-merger identification was influenced by organisational membership. At Time 1, members of the dominant merger partner perceived the merger as a continuation rather than a threat, whereas participants of the subordinate merger group perceived the situation as more ominous. This result replicated previous findings (Bartels et al., 2006; van Knippenberg et al., 2002). However, the aspect of a sense of continuity was previously not analysed using a longitudinal design. The present study fills this gap in research. As predicted, and differently to previous research, the effect of pre-merger identification for members of the dominant organisation was only significant at Time 1. Furthermore, pre-merger identification was not related to post-merger identification at Time 2 and Time 3, neither for the dominant nor for the subordinate organisation. This time-varying effect of pre-merger identification indicates a constraint to the sense of continuity hypothesis. Van Knippenberg and colleagues (2002, 2001) argued that a key determinant of continuity is organisational dominance by assuming that dominant merger partners undergo relatively little change and can maintain identity also within the new organisation. I assume that even for the dominant merger partner the merger becomes more threatening over its course. What causes the perception of threat? One possible explanation might be found in research by Hornsey and colleagues (2003). In the context of examining the consequences of a common fate situation they argued that the perception of a common fate is a possible source of threat for high status or respectively

dominant groups. It reflects an undesirable state because access to rewards is perceived as diminished for members of the high-status group and they have the impression to be dragged down by the less prestigious or subordinate group. If common fate is defined as “a coincidence of outcomes among two or more persons [groups] that arises because they have been subjected to the same external forces or decision rules” (Brewer, 2000, p. 118, as cited in Hornsey et al., 2003), we can understand a merger as a common fate for members of the involved organisations. Along these lines, perception of threat might increase for the dominant merger partner and lessens the sense of continuity if the merger is increasingly perceived as a common fate situation. This process may inhibit a positive relationship between pre- and post-merger identification at later points of the merger and should be further examined.

The results of ingroup typicality were not as predicted and are not in line with previous research (e.g., Bartels et al., 2006; Boen et al., 2006; van Leeuwen, et al., 2003). A potential explanation for the results as described above might be the valence of the superordinate category. I could argue that ingroup typicality is only a relevant predictor for post-merger identification if the superordinate category is evaluated positively (see Wenzel, Mummendey, Weber, & Waldzus, 2003 for a similar argument). Depending on the positive or negative evaluation of the newly merged organisation, the effect of ingroup typicality on post-merger identification could vary. Despite the fact that the dominant merger partner can be perceived as typical due to reality constraints, organisational members may nevertheless evaluated the superordinate category negatively (Waldzus, Mummendey, Wenzel, & Boettcher, 2004). If this is the case, as it might be for the merger at hand, organisational members would try to distance themselves psychologically from the superordinate category by means of dis-identifying. The interaction of ingroup typicality and organisational membership could be interpreted in a similar vein. The tendencies in the simple trajectories showed that members of the dominant organisation identify less with the post-merger organisation if they perceived the ingroup to be typical. This might be because they evaluated the new organisation as rather negative and fear, for example, a loss in status. The slight positive relation between ingroup typicality and post-merger identification for members of the subordinate organisation might be caused by a rather positive evaluation of the superordinate category. Future research should take into consideration the evaluation of the new merger organisation as a potential moderator (Tischendorf, 2007).

At all points of measurement members of the subordinate organisation perceived the implemented merger as less fair compared to members of the dominant organisation. This finding is in line with SIT and previous merger research (e.g., Terry & O'Brien, 2001) according to which members of the low or subordinate organisation become more aware of injustice in their disadvantaged position (Platow et al., 2003; Tajfel & Turner, 1986). In line with the group engagement model (Tyler & Blader, 2003) and previous merger literature (Amiot et al., 2006; Lipponen et al., 2004) perceived fairness positively predicted post-merger identification. This affirms the assumption that fairness issues transmit identity-relevant information and that the perception of a fair implementation enhances adjustment to the merger.

The predictive effect of perceived fairness on post-merger identification became more pronounced over time across members of both organisations despite mean level changes. On a theoretical level this is in line with the group engagement model that stresses the importance of fairness for identity judgement and psychological engagement (Tyler & Blader, 2003). Willingness to engage in one's group depends on identity information people receive from the group. This identity information is hypothesised to be contingent on fairness evaluation. I supposed that only if participants perceive the organisation as an identity-relevant category, information about fair treatment throughout the merger becomes increasingly important for identification with the newly merged organisation leading to higher psychological engagement with that group. As the merger unfolds the merged organisation seems to become more identity-relevant. The perception of a fair treatment in the merger process shapes the impression that the new organisation is a source of pride rather than shame that increasingly fulfils identification motives (Tyler & Blader, 2003; Haslam, Powell, & Turner, 2000).

4.5.2 Theoretical implication

Generally, the present chapter emphasised that identification is a dynamic and context-dependent process that occurs gradually over time (Pratt, 1998, see also section 2.3.2). Although the notion of contextual dependency is rooted in SIA and its meta-theoretical embedding, most previous research did not account for continuity over time and social psychologists have rarely studied the dynamics of change both in temporal and contextual terms (Reicher, 2004). While acknowledging the dynamic aspects already inherent in SIT and SCT (Condor, 1996; Tajfel, 1982), I propose to clearly stress flexibility and context in SIA and to bring developmental and temporal aspects

back on the research agenda. Furthermore, I suggest to extend SIA by incorporating a *time in events* perspective (Levine, 2003, p.67). This perspective focuses on the question how different *times* (e.g., processes, stages, and periods) contribute to identification processes or intergroup relation issues. The time in events approach moves beyond debates over stability and change by considering the developmental representation of constructs or events. This is closely related to a developmental perspective on social psychology. Rather than focusing on static perceptions of identity and identification, we should evolve on identity development and how people come to identify with social categories (Eisenbeiss & Otten, 2005 for similar argument) as well as the dynamics of change (see section 6.2.2 for further discussion)

4.5.3 Conclusion

Overall, the results of the present research add to a growing body of literature that has supported the importance of adopting an intergroup perspective on organisational merger research. Theoretically, the results of this study are important, to the extent that they help to clarify the developmental aspect of identification and relevant predictors in a changing intergroup context and to emphasise theoretical impact of *change*. Moreover, the study has implications for understanding the interplay of organisational dominance and Time (as a proxy for change) as moderators in identification processes.

Practically, these findings occur to be a little pessimistic, as it seems hard to find a best way to foster adjustment to a merger. Different time points within the merger process and organisational dominance influence post-merger identification, making a single strategy to intervene impossible. However, a more optimistic view is that knowing when and under which conditions problems arise alleviates implementations that are tailored to different organisations and stages throughout the merger. Mergers between two organisations need interventions that support members of both organisations and that take into account problems that occur at different time points (see chapter 6 for practical implications).

Der Grund war nicht die Ursache, sondern der Auslöser.

(Franz Beckenbauer)

5. Antecedents and Consequences of Ingroup Bias throughout a Merger

5.1 Introduction

Imagine that your organisation will be merged with a long time rival. What will be your reaction? Are you willing to cooperate, are you willing to share resources, or will your attitudes towards the members of the other organisation deteriorate? More generally, do mergers trigger favourable attitudes towards one's own pre-merger group and does that in turn influence the stance people have on a merger?

So far, the merger literature has focused on what triggers resistance towards the merger, or positively framed, what influences a positive stance regarding the merger and the involved merger partner. In social psychological terms, the aim is to understand conflict or cooperation during the process of merging. Buono and Bowditch (1989) argued that mergers trigger high levels of organisation instability which are accompanied by a *lack of cooperation* between the organisational members and a so-called *we vs. them mentality*. The *we-them distinction* is sometimes sufficient to activate differential response to ingroup and outgroup members and influences evaluations, cognitions, and behaviour towards group members (Brewer & Brown, 1998). Group membership can initiate ingroup bias defined as the systematic tendency to evaluate one's own group (ingroup) or its members more favourably than outgroup members (Hewstone et al., 2002), and could contribute to hostility and conflict (Gaertner, S. & Dovidio, 2000).

The present chapter examines ingroup bias as an indicator of intergroup conflict in a merger situation. The overall purpose is to shed light on the role of ingroup bias in the course of a merger and its effect on group members' response and stance on the merger. Typically, cross-sectional surveys are used to examine mergers from an intergroup perspective (Terry & O'Brien, 2001; van Knippenberg et al., 2002). However, on the basis of correlational field data it is impossible to convincingly establish hypotheses on directional effects. This critical disadvantage can be overcome applying a longitudinal design (Kenny, 1975; Taris, 2000). The present study is based on longitudinal data from a university merger and allows for examining directional effects as well as for understanding stability and change of ingroup bias and its

antecedents in the merger process. Based on previous intergroup literature on mergers (i.e., Amiot et al., in press; Terry & O'Brien, 2001), I focus on three variables as antecedents of bias, namely pre- and post-merger identification and positive intergroup contact. Furthermore, I examine their longitudinal effects on bias. Furthermore, I look to what extent ingroup bias has an effect on the overall stance concerning the merger. Expecting differential effects, I compare the dominant and subordinate merger groups' reactions.

5.2 Theoretical Background

5.2.1 Ingroup bias in the context of mergers

Previous research (e.g., Haunschild et al., 1994; Terry & Callan, 1998; Terry & O'Brien, 2001; van Leeuwen, 2001; Weiß, Noack, & Mummendey, 2007) has repeatedly shown that ingroup bias is a typical response to organisational mergers. Terry and O'Brien (2001) stated that a merger is likely to engender competitive and antagonistic intergroup relations and rivalry. This research is based on theoretically assumptions derived from the social identity approach (SIA). The SIA, which incorporates social identity theory (SIT; Tajfel & Turner, 1986) and self-categorisation theory (SCT; Turner et al., 1987), stresses the importance of belonging to different social categories (e.g., organisations). One of the key concepts in SIA is identification with a social category. A further fundamental assumption is that people are motivated to establish a positive social identity (the part of the identity derived from one's group membership; Tajfel & Turner, 1986) as part of the self-concept by belonging to groups that compare favourably with other groups.

A merger accentuates social comparisons (Tajfel & Turner, 1986) between the involved merger partners. Both (previously independent) groups are evaluated against the background of the superordinate category formed by the newly merged organisation (Turner et al., 1987). Results of social comparisons can lead to threatened social identities, if one's ingroup status position is not favourably compared to the status of the outgroup or if the ingroup is no longer positively distinct from the outgroup (Branscombe et al., 1999; Tajfel & Turner, 1986.)

Only rarely do mergers bring together equal partners (Cartwright & Cooper, 1995; Giessner et al., 2006; van Oudenhoven & de Boer, 1995). Mostly, one merger group is more dominant or the acquiring force. For the low-status or subordinate group the evaluation of the status quo (i.e., the disadvantaged status position) is threatening.

On the other hand, for the high-status or dominant group the possible status change is a source of uncertainty (Ellemers, 1993; Scheepers & Ellemers, 2005). Consequently, social comparisons threaten the pre-merger identity of both groups, though for different reasons, and are thus often met with increased ingroup bias (Branscombe et al., 1999; Jetten, Spears, & Mansted, 1997a; Ullrich, Christ, & Schlüter, 2006).

Previous studies (Amiot et al., 2006; Terry et al., 1998; 2001) showed that members of low-status groups reveal more ingroup bias than members of high-status groups. The authors concluded that members of the low-status pre-merger group were more threatened by the merger situation. They displayed more ingroup bias on status-irrelevant traits as a social creativity strategy. A social creativity strategy is defined as the means group members use to achieve positive distinctiveness by redefining or altering elements of the comparative situation (Tajfel & Turner, 1986). For the subordinate merger group, ingroup bias, especially on status-irrelevant traits, is a strategy to *enhance* their social identity (Scheepers & Ellemers, 2005; Terry & Callan, 1998). For the dominant merger group ingroup bias reflects a reaction to the merger group's perceived deviance from the newly merged organisation (Giessner et al., 2006; Mummendey & Wenzel, 1999). They display bias to *maintain* the positive social identity based on the pre-merger organisation, and to verify their superior position (Terry & Callan, 1998).

More general research on the influence of status or dominance on ingroup bias has shown mixed results (Mullen, Brown, & Smith, 1992). Some researchers have argued that ingroup bias increases as a function of status (Brewer, 1979); whereas others have claimed that it decreases (Hinkle & Brown, 1990). A meta-analysis by Mullen and colleagues (1992) showed that in natural settings the low-status members usually displayed higher levels of ingroup bias compared to high-status members.

Issues of ingroup bias and intergroup conflict are particularly important in involuntary and enforced mergers in which both former groups are basically suspended. It is important to note that mergers are not always implemented in a way that pre-merger organisations are fully relinquished. Different degrees of collaboration such as joint departments and mergers with federal or unitary structure (e.g., Harman & Harman, 2003 for educational sector) involve different degrees of change and integration (Marks & Mirvis, 2001). For the purpose of this chapter and in line with the merger under investigation, I focus on a merger with a unitary structure in which the pre-merger organisations are mostly dissolved. (see section 1.2.2).

5.2.2 Pre-merger identification

Against the background of conceptualising a merger mainly as a threat (e.g., Ullrich & van Dick, *in press*), the most straightforward predictor of ingroup bias during the course of a merger is pre-merger identification (e.g., Branscombe et al., 1999; Spears, Doosje, & Ellemers, 1997; Ullrich et al., 2006). I expect that higher identification is associated with more bias as an expression of a threatened identity and resistance to change (Branscombe et al., 1999). If organisational members are highly identified with the pre-merger organisation, they will search for a positive identity by means of displaying increased bias (Jetten, Spears, & Mansted, 1997b). Higher levels of pre-merger identification might be associated with a reaction to the merger groups' deviance from the (post-merger) superordinate group and will be expressed in forms of ingroup bias (Mummendey & Wenzel, 1999; van Leeuwen, 2001). In terms of directional effects, the existing literature is not fully conclusive. From a SIT perspective, identification should drive ingroup bias rather than vice versa (Jetten et al., 1997a). The corresponding hypothesis would be that identification determines bias. However, another assumption in contrast to SIT is that the identification-bias link operates as a feedback loop (Hewstone et al., 2002). That is, while higher identification initially leads to higher levels of ingroup bias, ingroup bias also enhances identification. Thus, I suppose a reciprocal effect of identification and bias. Generally, I focus on differing effects regarding previous organisational membership. So far there is hardly any research that has examined a possible moderating effect of status on the identification–bias relationship. Hornsey and Hogg (2002) studied the effects of status and categorisation on ingroup bias, but found no further evidence for an interaction of status and identification on bias. In line with these findings, I assume that the effect of identification on bias is not additionally influenced by organisational dominance.

5.2.3 Post-merger identification

Mergers create a new social category, namely the newly merged organisation, by combining the two previous organisations in a superordinate entity. If individuals identify with the superordinate category (post-merger organisation) and if the relevant outgroup (pre-merger outgroup) is seen as part of the superordinate category, the level of post-merger identification should be related to lower levels of ingroup bias (Gaertner S. et al., 1993). Research has shown that identification with a superordinate category is negatively related to bias (e.g., Gaertner, S. et al., 1993; Lipponen, Helkama, & Juslin,

2003). This was also found for studies conducted in a merger context (e.g., Amiot et al., in press; Terry et al., 2001; Terry & O'Brien, 2001; Weiß et al., 2007). The suggested underlying process is that when people define themselves in terms of a common social identity, they tend to identify with it and to respond to goals that advance the group as a whole. The Common Ingroup Identity model suggest that if both groups are recategorised into one common group, former outgroup members are perceived as part of an ingroup, which in turns leads to a better evaluation of former outgroup members (Gaertner, S. et al., 1993; Gaertner, S. & Dovidio, 2000).

I expect that an increase in post-merger identification is associated with a more favourable evaluation of involved previously outgroup members and their goals (see Haslam, Eggins, & Reynolds, 2003; Wegge & Haslam, 2003) that ultimately leads to a decrease of bias. Defining post-merger identification as a key indicator for merger adjustment (Millward & Kyriakidou, 2004), I thus assume that the relationship between post-merger identification and bias is similar for dominant and subordinate merger groups.

5.3.4 Dual identification

In addition to the unique effects of pre- and post-merger identification on bias, theoretical models based on the SIA suggest a combined impact of sub - and superordinate identification on intergroup bias (Gaertner, S. & Dovidio, 2000; Hornsey & Hogg, 2000; Mummendey & Wenzel, 1999). However, previous research has yielded inconsistent findings. For example, dual identity (i.e., high pre- and high post-merger identification) has been related to decreased (Gaertner, S., Dovidio, & Bachman, 1996) and increased bias (Mummendey & Wenzel, 1999; Waldzus, Mummendey, & Wenzel, 2005).

On the one hand, the structural relation between sub - and superordinate identity makes it possible that the superordinate identity is a source of pride and provides a positive social identity. Yet, this does not necessarily conflict with the positive attributes of the subgroup identity (Gaertner, S. & Dovidio, 2000; Hornsey & Hogg, 2000; Hewstone & Brown, 1986). Thus, organisational members high in pre-merger identification and high in post-merger identification (high/ high) may score relatively low on ingroup bias.

On the other hand, Mummendey and Wenzel (1999) argued that dual identification may very well lead to higher levels of ingroup bias. Their Ingroup

Projection Model (IPM) states that a salient superordinate category triggers a cognitive process that contributes to an exacerbation of ingroup bias. This process is based on self-categorisation principles (Turner et al., 1987) and involves a social projection process. Attributes of the ingroup are generalised or *projected* onto the superordinate category. The process of ingroup projection increases the perceived prototypicality of the ingroup for the superordinate category, which constitutes the basis for ingroup favouritism. This process should be especially pronounced if group members identify strongly with the sub- and superordinate category (Mummendey & Wenzel, 1999; Walczus, Mummendey, Wenzel, & Weber, 2003; Wenzel et al., 2003). Translated into the merger context, high identifiers with both the pre-merger and the post-merger organisation can be expected to display higher rates of ingroup bias.

A further possible reaction to a merger is that organisational members negatively evaluate the merged organisation and reject the new inclusive post-merger identity while holding on to the pre-merger identity. This particular identification pattern (high pre-merger identification and low post-merger identification) has been found to result in negative attitudes towards group members of the other merger partner (Terry & O'Brien, 2001; Terry et al., 2001; van Dick, Wagner, & Lemmer, 2004). More specifically, I would assume that those participants who highly identify with the pre-merger organisation but not with the post-merger organisation (high/ low) will display the largest amount of ingroup bias. Given the inconsistent findings, my examination of the combined effect of pre- and post-merger identification on bias is exploratory.

5.3.5 Positive intergroup contact

I suggest that positive intergroup contact should be taken into account when considering responses to organisational mergers. According to the contact hypothesis introduced by Allport (1954), intergroup contact promotes the development of harmonious intergroup relations. Allport proposed that contact influences intergroup relations positively only under optimal contact conditions such as equal status, cooperation, common goals, and a supportive environment. However, Pettigrew and Tropp (2006) showed in a meta-analysis that contact in itself has a positive influence on reducing intergroup prejudice and conflict. Moreover, merger studies (Terry et al., 2001; Terry & O'Brien, 2001) revealed a negative relation between contact and ingroup bias, suggesting that intergroup contact reduces ingroup bias. The original model by Allport (1954), as well as the theoretical extension by Pettigrew (1998), posits that

contact causally influences prejudice and/ or ingroup bias. However, longitudinal research (Binder, Zagefka, Brown, Funke, Kessler et al., 2007; Eller & Abrams, 2003, 2004) revealed reciprocal relations between contact, prejudice, and several mediators. The authors concluded that contact should not exclusively be regarded as the starting point of a causal sequence resulting in reduced bias and reduced prejudice (see also Henry & Hardin, 2006). Less prejudiced or less biased individuals may be more likely to seek intergroup contact, and positive intergroup contact in turn may have further positive influence on reducing prejudice and bias. In line with these assumptions, I assume that contact reduces bias and is reciprocally linked to ingroup bias.

The effect of contact on bias might be influenced by status or organisational dominance. Pettigrew and Tropp (2006) found that for high-status or majority members the influence of contact on prejudice is significantly stronger than for low-status or minority members. Pettigrew and Tropp pointed out that the majority members who are often of higher status are concerned about avoiding discriminatory behaviour that might be counter-normative. Minority members or low-status groups are likely to be concerned about being discriminated against because this would affirm their inferior status position (see also Binder et al., 2007; Henry & Hardin, 2006). Hence, members of different status groups might perceive the same situation differently. For low-status or subordinate groups it might be more difficult to see the optimal contact conditions met, leading to a less pronounced effect of contact on intergroup attitudes. Therefore, I seek to investigate the potential asymmetry for members of the dominant or subordinate organisation. My expectation is to find reduced contact effects for members of the subordinate organisation compared to members of the dominant organisation.

5.3.5 Consequences of ingroup bias

Ingroup bias is often described as a response to a merger that obstructs merger success or support (e.g., Amiot et al., in press). To my knowledge, this assumption has seldom been empirically tested. Specifically, I focus on consequences of ingroup bias throughout a merger.

Usually, the outcome of a merger is measured in terms of economical success (Klendauer et al., 2006). However, in a non-profit merger the final outcome is not that clearly defined and difficult to measure. Besides the financial success rate, the subjective evaluation by individuals experiencing the merger might be a key variable of merger success (Klendauer et al., 2006; Hogan & Overmyer-Day, 1994). Subjective

evaluation includes the perception of support and goal achievement through the merger. Following this line of reasoning, I propose that a *positive stance on the merger* might be a crucial aspect for understanding success and failure from a psychological perspective.

A positive stance should include the anticipation of merger success and the willingness to support the merger. Previous research has rarely focused on measures of merger success or a positive stance. As an exception, Giessner and colleagues (2006) showed that merger support depends on the way the merger is implemented (i.e., merger patterns).

If, as Terry and O'Brien (2001) have argued, a merger produces competitive and antagonistic intergroup relations and rivalry, I assume that this will lead to a decrease in support for and anticipated success of the merger. The newly merged organisation as the target of support and success includes the merger partner that threatens one's group positive social identity. The more organisational members differentiate between ingroup and outgroup, the less willing they should be to positively evaluate and to support the merger. Accordingly, I suggest that ingroup bias is negatively related to a positive stance because the more organisational members display ingroup bias, the less they appraise the merger to be a success. I further explore a reciprocal relation suggesting that once a positive stance is established, it will lead to a reduction in ingroup bias.

5.3 Hypotheses

The major objective of the present study is to examine ingroup bias in the course of a merger. I used a longitudinal design which allowed to assess causal priority among variables and to examine directional effects. The following predictions were tested:

1. Pre-merger identification, post-merger identification, and contact are expected to operate as antecedents of ingroup bias. More precisely,
 - a) Pre-merger identification is assumed to positively influence ingroup bias. Higher levels of pre-merger identification lead to an increase in ingroup bias. Additionally, I explore the reversed effect of bias influencing identification.
 - b) Post-merger identification is assumed to negatively influence ingroup bias. Higher levels of post-merger identification, lead to an increase in ingroup bias.
 - c) I expect that intergroup contact leads to less bias. I assume that the effect of contact on bias is more pronounced for members of the dominant group than for members of the subordinate group. Additionally, I explore whether ingroup bias also influences the amount of contact

2. Pre- and post-merger identification are expected to interact in affecting ingroup bias. As outlined above, the combined effect of high subgroup and superordinate identification yielded inconsistent effects. Furthermore, I explore whether the combined effect of pre- and post-merger identification is related ingroup bias.

3. A positive stance on the merger is a consequence of ingroup bias.

a) A positive stance on the merger is negatively related to ingroup bias.

b) I explore a reciprocal influence of bias on positive stance.

I include a judgemental and a behavioural bias measure, to assess different aspects and functions of ingroup bias (Jetten, Spears, & Postmes, 2004). Typical examples of instrument for judgemental bias are trait ratings of the ingroup and outgroup, whereas a typical behavioural measure is a resource allocation task.

5.4 Method

5.4.1 Participants

For the second empirical chapter, I focus only on data from Time 2 and Time 3 because measures crucial to the present study were only included at the two later time points. A total of 314 participants completed the second questionnaire, and 378 completed the third one. 211 completed both questionnaires (67% response rate in reference to Time 1). The sample consisted of 119 students from the former university and 92 students from the former polytechnic. Those who completed the questionnaire at Time 2 and Time 3 were between 20 and 34 years ($M = 24.46$) old. Forty-eight percent of the participants were female and 52% male. For the present analysis I label the two measurement points Time 1 and Time 2 for reasons of clarity.

Preliminary analyses indicated that participants of the two involved organisations differed in terms of age, $t(209) = 4.46$, $p = .028$, and gender, $\chi^2(1, N = 211) = 12.66$, $p = .004$. Participants from the former polytechnic were slightly older ($M = 25.54$, $SD = 2.09$) than participants from the former university ($M = 23.62$, $SD = 2.63$). In the former polytechnic 34% females and 66% males participated and in the former university 59% were females and 41% males.

All participants were enrolled in economics (polytechnic) or economics and social science (university) because economy was taught in both former institutions and was combined into one school after the merger. Despite slight differences in the distribution of gender and age in the two samples, they did not affect any results included as control variables and were, therefore, dropped from the analyses.

5.4.2 Design and procedure

Design and procedure are extensively described in section 4.3.2. Since the data of the present empirical chapter relies on the two later time points, both questionnaires were assessed online.

5.4.3 Measures

Identification. Post-merger organisational identification was assessed with four items on a 7-point Likert scale adopted from Doosje et al. (1995) (e.g. “I see myself as a member of the newly merged organisation”). Pre-merger identification was assessed with the same items, but referring to “my former organisation” instead of the merged organisation. Cronbach’s α at Time 1 and 2 were .79 and .84 for pre-merger identification and .88 and .90 for post-merger identification.

Intergroup Contact. Contact was measured with two items adopted from Islam and Hewstone (1993) that focus on quantitative aspects of contact. The two items were “How often do you have contact with members of the former outgroup (OG)?” and “Do you have any friends or acquaintances from the former OG?”. Subjects rated these items on a 7-point Likert scale ranging from 1 (*never*) to 7 (*very often*) for the first item and 1 (*none*) to 7 (*very many*) for the second item. These measures were correlated ($r = .68$ at Time 1 and $r = .69$ at Time 2) and were combined to a single index of positive intergroup contact.

Judgemental Ingroup Bias. Evaluations of the ingroup and the outgroup were measured with 9 items (e.g., “I like students of [my former institution]...”, “I would appreciate having more intensive contact with students of...”, “If someone is arguing against the education of ..., I usually defend it”) on a 7-point Likert scale ranging from 1 (*not true at all*) to 7 (*completely true*) adapted from Weber, Mummendey, and Waldzus (2002). Internal consistencies were good for ingroup ratings and outgroup ratings both at Time 1 (α ’s = .88, .88) and at Time 2 (α ’s = .80, .84). A difference score was computed as a measure of judgemental ingroup bias ranging from -7 to 7.

Behavioural Ingroup Bias. To assess behavioural tendencies, a simple resource allocation task was used (e.g., Harth, Kessler, & Leach, 2007). Participants were instructed to imagine that they could influence the financial distribution throughout the merger process. All participants had to indicate how many monetary units out of 100 they would allocate to the in-group and how many units they would give to the out-

group. A difference score was computed as a measure of behavioural ingroup bias and ranged from -100 to 100.

Positive stance on a merger. A five item scale measured a positive stance concerning the merger, (“My willingness to support the merger is high.”, “I think, the integration of both companies will lead to a success.”, “I am pleased with the on-going merger.”, “I am committed to leading the merger to a success”, “As a student I perceive the merger as a positive development.”). Ratings were done on 7-point Likert scales ranging from 1 (*not at all*) to 7 (*very much*). Cronbach’s α at Times 1 and 2 was .84 and .83.

5.5 Results

5.5.1 Panel attrition

To test whether the sample of participants completing the Time 1 and Time 2 questionnaires ($N = 211$) differed from those who completed only the first questionnaire ($N = 57$), a multivariate analysis of variance (MANOVA) was used.

Associations between drop-out between Time 1 and Time 2 and the model variables at Time 1 were tested. With a MANOVA I compared those who participated only at Time 1 ($N = 51$) with those who participated at both time points ($N = 211$) in regard to the model variables at Time 1. The MANOVA revealed a significant difference at the multivariate level, $F(7, 249) = 2.21, p = .03, \eta^2 = .06$. Further analyses yielded significant differences at the univariate level for judgemental ingroup bias, $F(1, 257) = 7.71, p < .001, \eta^2 = .03$, and contact, $F(1, 257) = 4.62, p = .03, \eta^2 = .02$, and a marginally significant difference for the behavioural ingroup bias, $F(1, 257) = 3.22, p = .07, \eta^2 = .01$. Participants who participated only at Time 1 showed less judgemental ingroup bias ($M = .23$) than those who also participated at Time 2 ($M = .85$), the same was true for the behavioural ingroup bias ($M = 1.72$ vs. $M = 11.49$). Furthermore, those participants who dropped out had more contact with the former outgroup ($M = 3.78$) than those who completed both questionnaires ($M = 3.28$). These results have to be kept in mind when discussing the findings.

Prior to the main analyses, all variables were tested for missing data. Following a recommendation by Kline (2005) the missing data were imputed using the expectation-maximization (EM) algorithm, as they represented less than 2 % of the sample size.

5.5.2 Preliminary analysis: Change in variables over time and intercorrelations

Variables were subjected to a mixed-model analysis of variance (ANOVA) with *Time* as the within-participants factor and *organisational membership* as a between-participant factor to assess change over time. A summary of the results is given in Table 1. Post-merger identification increased over time. Moreover, post-merger identification differed between organisations. Members of the dominant organisation identified more strongly with the post-merger organisation than those from the subordinate organisation. None of the other predictor variables changed significantly over time (all $F_s < 1$, see Table 4). However, both bias measures changed over time. Judgemental bias increased significantly but did not differ between organisations. Also the behavioural bias increased over time and members of the dominant organisation showed significantly more bias than members of the subordinate organisation. Positive stance did not differ between time points or organisations (all $F_s < 1$).

Table 4. Means and standard deviation, for change over time and differences between groups

	Time 1		Time 2		F_{Time} (1, 207)	η^2	$F_{Orga.}$ (1, 207)	η^2	$F_{TimexOrga.}$ (1, 206)	η^2
	Subord. $M (SD)$	Domt. $M (SD)$	Subord. $M (SD)$	Domint. $M (SD)$						
Post-merger id.	3.21 (1.41)	3.84 (1.36)	3.44 (1.40)	4.10 (1.39)	8.34***	.039	13.45***	.062	0.03	.000
Pre-merger id.	5.59 (1.21)	5.70 (0.99)	5.51 (1.24)	5.67 (1.05)	0.56	.003	0.93	.003	0.12	.001
Contact	3.60 (1.42)	3.06 (1.42)	3.62 (1.51)	3.11 (1.38)	0.18	0.01	8.23**	.04	0.02	.000
Judgemental Bias	1.15 (1.19)	0.86 (1.51)	1.26 (1.11)	1.14 (1.17)	6.60**	.031	1.64	.009	1.17	.006
Behavioural Bias	4.00 (24.59)	17.19 (29.09)	4.83 (24.21)	25.47 (24.21)	4.15*	.02	25.13***	.11	2.76	.013
Positive stance	3.15 (1.13)	2.93 (1.11)	3.13 (1.16)	3.00 (1.03)	0.22	.001	1.46	.007	0.95	.005

Note: Domt: = dominant, Subord. = subordinate,
 ** $p < .05$, *** $p < .001$ (two-tailed test)

Intercorrelations for all variables are presented in Table 5. The pattern of coefficient was quite similar in both waves. The two bias measures seemed to be related but not identical as intercorrelations of the z-standardized bias measures at Time 1 and Time 2 showed. At Time 1 the correlations for the judgemental bias and behavioural bias were $r = .36, p < .001$, and for Time 2 it was $r = .23, p < .001$.

Table 5. Intercorrelations between variables at Time 1 and Time 2 (N=211)

Variable	1	2	3	4	5	6
1. Post-merger identification		-.08	.17*	-.26**	-.06	.56**
2. Pre-merger identification	.04		-.06	.33*	.13	-.27**
3. Contact	.15*	-.04		-.27**	-.18*	.18**
4. Judgemental bias	-.21**	.48**	-.31**		.35**	-.30**
5. Behavioural bias	-.04	.15*	-.08	.23**		-.12
6. Positive stance	.57**	-.27**	.17*	-.45**	-.19*	

Note. Correlations in the upper half-matrix refer to Time 1, in the lower half to Time 2.

* $p < .05$, ** $p < .01$ (two-tailed test)

5.5.3 Predictors of both measures of Ingroup Bias

In order to test the assumptions that pre- and post-merger identification as well as contact are related to the judgemental and behavioural bias, I tested a path model with the mentioned predictors and two outcome variables, judgemental and behavioural ingroup bias. To assess directional effects between the variables, cross-lagged regression analyses were conducted (Kenny, 1975; Rogosa, 1980) using AMOS 5.0 (Arbuckle, 2003).

Where indicated, I tested whether the predicted effects held for members of both involved organisations. Testing for (in-)variance across groups requires a multi-step process (Byrne, 2004). In a first step, I tested for the validity of the hypothesised model across the two groups simultaneously. The fit of this fully unconstrained model provided the baseline against which the subsequent invariance model was compared. According to the hypothesis, I expected all relations to be similar for the dominant and subordinate organisation except for the effect of contact on bias.

Firstly, I analysed the model as shown in Figure 6 (Model 1). I assessed the model's goodness of fit by using the chi-square ratio, the Normed Fit Index (NFI), and the Root Mean Square of Approximation (RMSEA). An acceptable fit is indicated by a non-significant chi-square value, RMSEA values between .06 and .08, and a NFI value

above .95 (Hu & Bentler, 1999). Additionally, I report the Akaike information criterion (AIC) that is a parsimony-adjusted index favouring simpler models. The AIC is used in path models to select among competing nonhierarchical models estimated with the same data (Kline, 2005).

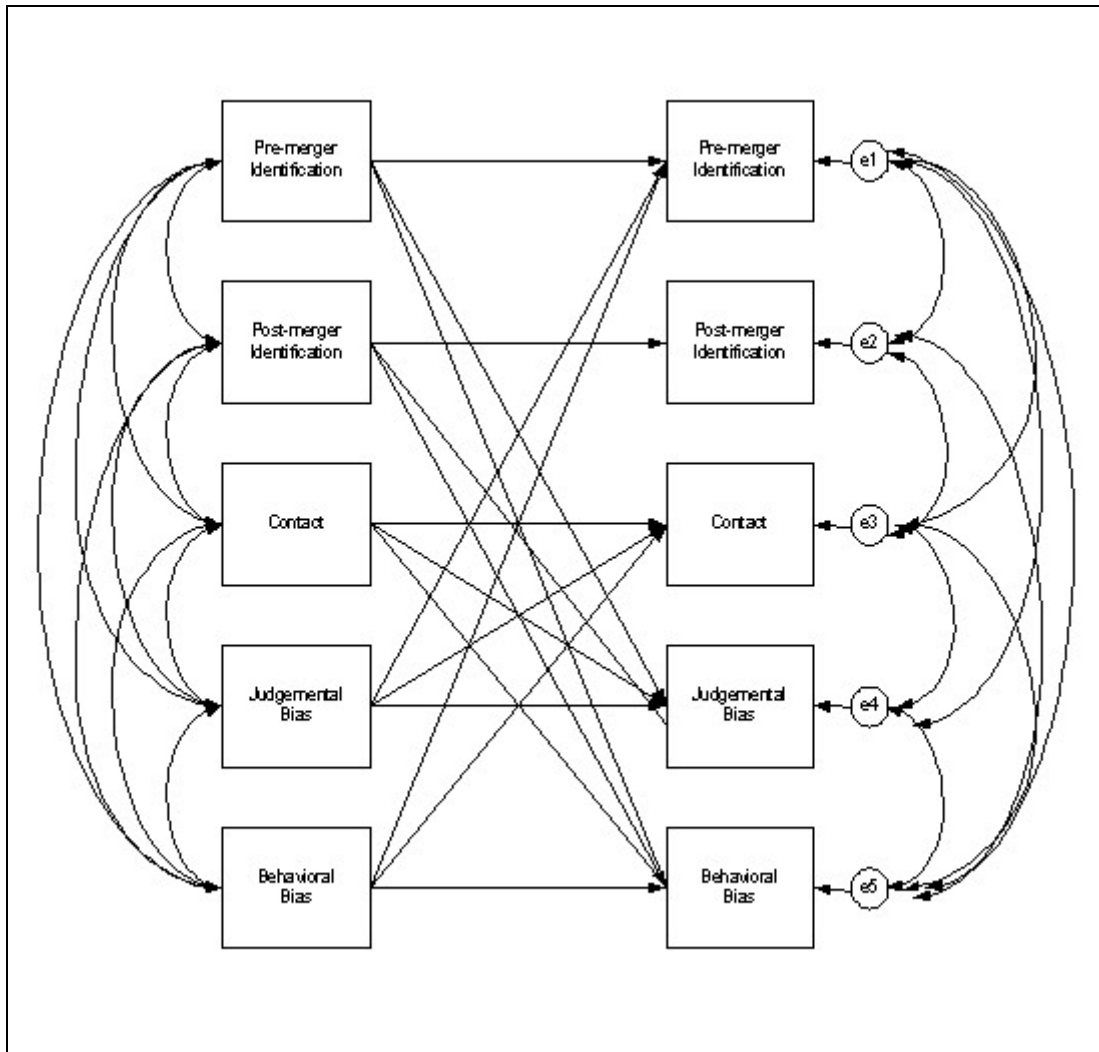


Figure 4. Path-model: Antecedents of judgemental and behavioural ingroup bias.

Model 1 showed a good fit, $\chi^2 (22, N = 211) = 26.35, p = .24$, RMSEA = .03, NFI = .97, AIC = 202.20. In a second step, the model was tested using the same structure as the initial model but with all structural weights constrained to be equal across the dominant and subordinate organisations. To test for invariance, the fit of this constrained model (Model 2) was compared with the fit of the initially unconstrained model (Model 1). The difference in chi-square between the two models was significant, $\Delta\chi^2 (15, N = 211) = 24.89, p = .05$, fit indices were $\chi^2 (37, N = 211) = 51.07, p = .06$, RMSEA = .04, NFI = .93, AIC = 197.07. This suggests that the second model fitted the

data slightly worse than the unconstrained model. In line with my assumptions that contact on both bias measures would vary between groups, I tested a model in which all paths - except the paths from contact to both bias measures - were constrained to be equal between organisations (Model 3). Again, this model was compared to Model 1. The chi-square difference was not significant, $\Delta\chi^2(11, N = 211) = 15.34, p = .16$, the fit of the Model was $\chi^2(33, N = 211) = 41.53, p = .15$, RMSEA = .03, NFI = .95, AIC = 195.33. Thus, the hypothesised model fits the data well.

Modification indices suggested the addition of a path from pre-merger identification at Time 1 to post-merger identification at Time 2. After including this into the path the model (Model 4) the fit was $\chi^2(31, N = 211) = 30.44, p = .34$, RMSEA = .001, NFI = .96, AIC = 188.40. Model 4 (AIC = 188.40) compared with Model 3 (AIC = 195.53) has a slightly lower AIC, and is preferred over Model 3. Higher levels of pre-merger identification were related to lower levels of post-merger identification at Time 2 for members of the subordinate organisation, whereas this relation was positive for the dominant organisation. The regression coefficients and stabilities for this model are summarised in Table 6.

Table 6. Regression weights for a two-wave panel model for judgemental and behavioural bias measure

Criterion (Time 2)	Predictor (Time 1)				
	Post-merger id.	Pre-merger id.	Contact	Judgemental bias	Behavioural bias
Post-merger id.	.61***	-.14* .19**			
Pre-merger id.		.60***		.09 ⁺	.09 ⁺
Contact			.75***	.05 .05	-.09 .20*
Judgemental bias	.01	.19***	-.13* -.18**	.49***	
Behavioural bias	-.03	.02	-.11 .07		.41***

Note. The coefficients in each cell represent the regression weights for the lags between Time 1 and Time 2. All variables were z-standardised before inclusion in the model. The coefficients in each cell represent the common solution for the dominant and subordinate organisation. In case of significant differences between the samples, the solution for the dominant organisation is in bold. The blank cells represent cross-lagged regression coefficient that were hypothesised to be zero, and were set to null. Model fit is $\chi^2(31, N = 211) = 30.40, p = .34, RMSEA = .01, NFI = .96, AIC = 188.40$
⁺p<.10, *p<.05, **p<.01, ***p<.001

To sum up, pre-merger identification at Time 1 significantly predicted change in judgemental bias from Time 1 to Time 2 for both the subordinate and the dominant organisation. The same was true for contact. Additionally, pre-merger identification was marginally influenced by judgemental bias indicating a bidirectional relation between pre-merger identification and judgemental bias. The reversed effect of judgemental bias on contact was not significant, suggesting that contact influenced bias negatively, but I found no evidence for a bidirectional relationship. Moreover, pre-merger identification at Time 2 was influenced by behavioural bias at Time 1.

Although the model fitted the data well, some of the proposed lagged regression weights did not reach significance and did not allow for causal inferences about relationships between the concepts. The cross-lagged regression weight for post-merger

identification on judgemental bias was close to zero and non-significant for members of the dominant and the subordinate organisation despite significant cross-sectional correlations as seen in Table 2. I found no longitudinal effects on behavioural bias. In addition, the results revealed that the behavioural bias is not significantly influenced by pre-merger identification. Contact was also not significantly related to behavioural bias and had no significant effect on the reversed relation for the subordinate group. Unexpectedly, behavioural bias at Time 1 had a positive significant effect on contact at Time 2 for members of the dominant group.

5.5.4 Dual identification

To test the combined effect of pre- and post-merger identification on ingroup bias, I applied an interaction analysis (Cohen, Cohen, West, & Aiken, 2003). A hierarchical regression analysis was performed on judgemental ingroup bias at Time 1 and Time 2 separately. Pre-merger identification and post-merger identification were centred and entered in the first step. Additionally, I included organisational membership coded as 1 for subordinate and 0 for dominant organisation. This analysis revealed that, at Time 1, pre-merger identification was positively related ($\beta = .31, p < .001$) and post-merger identification was negatively related to judgemental bias ($\beta = -.21, p = .001$), but organisational membership had no effect, $\beta = .06, p = .32$ ($R^2 = .17, F(3, 207) = 13.98, p < .001$). In a second and third step I included interaction terms of pre-merger identification with organisational membership, post-merger identification with organisational membership, pre- and post-merger identification, as well as a three-way interaction of pre-, post-merger identification, and organisational membership. All two-way interactions were significant ($\Delta R^2 = .081, F(3, 204) = 7.31, p < .001$), but they were qualified by a significant three-way interaction ($\beta = .26, p = .01; \Delta R^2 = .023, F(1, 203) = 6.34, p = .01$). Dissolving this three-way interaction, I found that the two-way interaction of pre- and post-merger identification on ingroup bias was stronger for members of the dominant organisation ($\beta = -.37, p < .001$) compared to the findings for the subordinate organisation ($\beta = -.19, p = .054$). Inspections of the simple slopes for the dominant group revealed that pre-merger identification was significantly related to ingroup bias when post-merger identification was low ($\beta = .65, p < .001$) but not when post-merger identification was high ($\beta = .11, p = .23$). For the subordinate group the results showed similar effects. Pre-merger identification was only significantly related to ingroup bias when post-merger identification was low ($\beta = .35, p < .001$) but not when post-merger identification was high ($\beta = .12, p = .28$).

The same analysis was applied to the Time 2 data. Again, pre-merger identification was positively related ($\beta = .45, p < .001$) and post-merger identification was negatively related to judgemental bias ($\beta = -.29, p = .001$), but organisational membership had no effect ($\beta = .002, p = .96; R^2 = .25, F(3, 207) = 22.64, p < .001$). The inclusion of the two-way interactions revealed significant effects and an increase in explained variance ($\Delta R^2 = .044, F(3, 204) = 4.17, p = .007$). The three-way interaction was only marginally significant ($\beta = .16, p = .060; \Delta R^2 = .013, F(3, 201) = 1.23, p = .30$). However, analysing the organisations separately showed that the two-way interaction of pre- and post-merger identification on bias was only significant for the dominant organisation ($\beta = -.21, p = .009$) but not for the subordinate one ($\beta = -.02, p = .86$). Inspections of the simple slopes for the dominant group revealed that pre-merger identification was significantly related to ingroup bias when post-merger identification was low ($\beta = .68, p < .001$) but also, though weaker, when post-merger identification was high ($\beta = .31, p = .005$).

Lastly, I investigated whether the interaction effects found for Time 1 held longitudinally. Interactions were established following an extended version of standard procedure (Cohen et al., 2003). Ingroup bias at Time 2 was predicted by pre- and post-merger identification while controlling for ingroup bias at Time 1. Further, the interactions were added to the model. The argument would be that this kind of moderation rests on the influence of previous identification and not identification experienced during the course of measurement. Accordingly, I chose post-merger identification at Time 1 as a potential moderator. Hence, judgemental bias at Time 2 was predicted by pre- and post-merger identification at Time 1, while controlling for judgemental bias at Time 1 and organisational membership. Furthermore, the interaction between pre-merger identification and organisational membership, post-merger and organisational membership, pre- and post-merger identification, as well as the three-way interaction (all at Time 1) were added to the model. The only longitudinal effect was obtained by pre-merger identification on ingroup bias, as outlined previously. None of the other main- or interaction effects at Time 1 accounted for changes in ingroup bias at Time 2.

The same interaction analyses, cross-sectionally and longitudinally, were conducted for the behavioural bias measure. Yet, no signs of interaction emerged (all F s < 1).

5.5.5 Consequences of both measures of ingroup bias

I finally tested the assumption that both bias measures (negatively) influenced a positive stance on the merger. Firstly, I tested an unconstrained model in which I modelled bidirectional paths for judgemental bias and positive stance as well as bidirectional paths for behavioural bias (Model 5, see Figure 7).

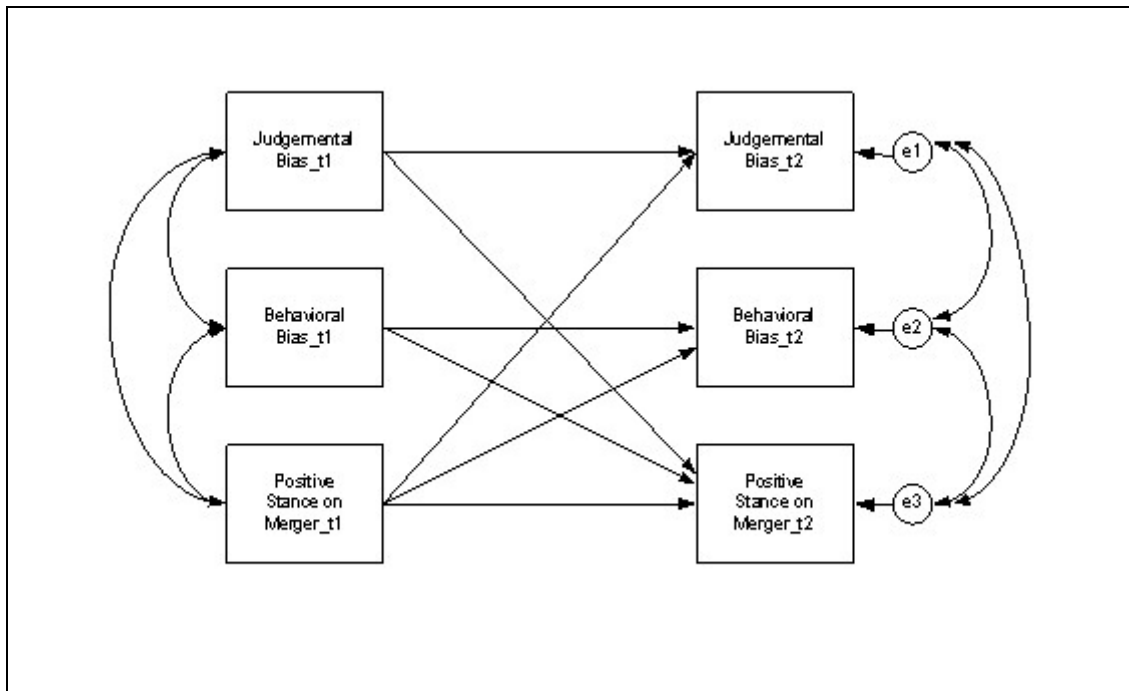


Figure 5. Path-model: Consequences of judgemental and behavioural ingroup bias.

This model had a satisfactory fit, $\chi^2(4, N = 211) = 7.56, p = .11$, RMSEA = .06, NFI = .98. To test for invariance between the dominant and subordinate group, the fit of this unconstrained model was compared to the fit of a constrained model (Model 2). The difference in chi-square between the two models was not significant, $\Delta\chi^2(7, N = 211) = 1.84, p = .96$. Fit indices were $\chi^2(11, N = 211) = 9.42, p = .58$, RMSEA = .00, NFI = .98. This suggests that the hypothesised structure of regression weights applied to both, the dominant and subordinate subsample. The stabilities and regression weights are summarised in Table 7.

Table 7. Regression weights for a two-wave panel model for positive stance on merger

Criterion (Time 2)	Predictor (Time 1)		
	Judgemental bias	Behavioural bias	Positive stance over merger
Judgemental bias	.57***		-.12*
Behavioural bias		.40***	-.09 ⁺
Positive stance on merger	-.08 ⁺	-.04	.77***

Note. The coefficients in each cell represent the regression weights for the lags between Time 1 and Time 2. All variables were z-standardised before inclusion in the model. The coefficients in each cell represent the common solution for the dominant and subordinate organisation. In cases of significant differences between the samples, solution for dominant organisation is in bold. The blank cells represent cross-lagged regression coefficient that were hypothesised to be zero, and were set null. Model fit is $\chi^2(11, N = 211) = 9.42, p = .58, RMSEA = .00, NFI = .98, AIC = 71.42$.

⁺p<.10, *p<.05, **p<.01, ***p<.001

Judgemental bias was marginally significant in predicting a positive stance suggesting that bias reduced a positive stance. Yet, as predicted, the relationship was bidirectional as shown in a significant prediction of positive stance. This reflects that once a positive stance towards the merger was established it reduced judgemental bias. On the contrary, the behavioural bias measure was not significantly related to a positive stance. Yet, once a positive stance was present at Time 1, it marginally predicted changes in behavioural bias at Time 2.

5.6 Discussion

The present study was designed to examine antecedents and consequences of ingroup bias and to extend previous research by focusing on stability and change in the related constructs. To my knowledge, this was the first study to systematically focus on directional effects of bias in the merger context by applying a longitudinal design. The relations with ingroup bias showed mixed patterns in terms of causal relations.

Pre-merger identification and positive intergroup contact at Time 1 significantly predicted changes in judgemental ingroup bias at Time 2. Additionally, pre-merger

identification was reciprocally related to judgemental bias. Post-merger identification and the combined effect of pre- and post-merger identification at Time 1, however, did not affect ingroup bias at Time 2, even though cross-sectional results revealed significant effects. Moreover, changes in judgemental ingroup bias predicted changes concerning a positive stance on the merger. Additionally, the reversed effect was also found indicating that a positive stance at Time 1 predicted less ingroup bias at Time 2. The relations with other variables were different for judgemental and behavioural bias. Pre-merger identification and contact were only related to judgmental bias but not to behavioural bias. These findings suggest that while the two bias measures are related constructs, they nonetheless serve different functions

5.6.1 Antecedents and consequences of ingroup bias

The present study corroborates findings that indicate that identification is positively linked to ingroup bias when social identity is under threat (Jetten et al., 1997a). However, high levels of ingroup bias also went along with higher levels of pre-merger identification. This finding is in line with the suggestion by Hewstone et al. (2002) that ingroup bias might operate according to the principles of a feedback loop. Hence, ingroup bias, as expressed on the judgemental measure, could be understood as a way to express and to confirm one's social identity (Scheepers, Spears, Doosje, & Manstead 2006): The more individuals identify with their group, the more they show bias; the more they show bias, the more they identify. The merger situation with its inherent threat to distinctiveness may reinforce and help to secure the positive value of a given group thus serving the purpose to confirm the pre-merger identity. The analyses showed that this relationship is true for both members of the dominant and the subordinate organisation.

In line with the contact hypothesis (Allport, 1954; Pettigrew, 1998), contact reduced judgemental ingroup bias over time in the present study. The effect of contact on bias was more pronounced for members of the dominant organisation than for members from the subordinate one. These findings corroborate the idea that dominant or high-status groups are more strongly affected by a contact situation than low-status or subordinate groups (Pettigrew & Tropp, 2006) and that members differing in status perceive contact situations differently (Binder et al., 2007). Contrary to results by Eller and Abrams (2003, 2004) and Binder et al. (2007), I did not find any indication for a bidirectional relationship between contact and ingroup bias. Judgemental bias at Time 1

had no effect on contact at Time 2. This finding supports Allport's (1954) original proposition that contact precedes prejudice.

Surprisingly, neither post-merger identification nor the combined effect of pre- and post-merger identification had longitudinal effects. This scarcity of significant effects is contrasted by cross-sectional evidence of intercorrelations and regression analyses at Time 1 and Time 2, indication that the identification measures cannot be dismissed as simply an unreliable operationalisation since I indeed found significant effects on judgemental bias at Time 1 and Time 2. Thus, in the short-term post-merger identification as well as the interaction of pre- and post-merger identification may affect bias, but there is no evidence for long-term effects.

Previous research on the effect of superordinate identification on ingroup bias found similar results concerning longitudinal effect. Eller and Abrams (2003, 2004) tested the CIIM longitudinally and found no longitudinal effect of identification at the superordinate level and outgroup attitudes. A four-wave longitudinal study by Hong, Liao, Chan, Wong, Chiu et al. (2006) found that social identity measured in Waves 2 and 3 do not predict attitudes in subsequent waves. Kessler and Mummendey (2001) found mixed evidence for a causal relation between common ingroup categorisation and intergroup conflict. A possible explanation of lacking effects is that identification with the superordinate category, especially in times of change, is defined in more abstract terms and furthermore changes only slow. With time, however, the superordinate category becomes more concrete and changes in identification with it may influence the longitudinal relation among variables. Future research should examine the interplay of cross-sectional and longitudinal effects of superordinate identification and focus on possible time-varying effects of predictor variables (Mitchell & James, 2001).

Even though the interaction of pre- and post-merger identification showed significant cross-sectional results, neither CIIM's nor IPM's assumption about dual identification seemed to be directly supported or opposed by my results. Inherent to the CIIM and IPM is that the proposed processes only work if the superordinate category is a positively evaluated reference category (Turner et al., 1987). Ingroup projection, for example, should lead to a negative evaluation of the outgroup, especially when people identify with both the sub- and superordinate category and if the inclusive category is evaluated positively. The opposite effect is supposed to occur when the inclusive category is evaluated negatively (Wenzel et al., 2003). Given this prerequisite, highly identified group members should distance their ingroup from the negatively evaluated

inclusive category. In the present study, group members identified only weakly with the merged organisation (see Table 1).⁹ This could be an indication of participants distancing their ingroup from the negatively evaluated inclusive category. The merger at hand, as many other mergers, was compulsory. That means organisational members might have been categorised as members of the newly merged organisation against their will. This kind of *categorisation threat* (Branscombe et al., 1999) might have been addressed with dis-identification and distancing the ingroup from the inclusive category. The merged organisation was a relevant but enforced category and did not provide means for a positive social identity. Categorisation threat might have been preceded by a negative evaluation and decreased post-merger identification, leading to a reversed ingroup projection effect (for a similar argument see Tischendorf, 2007). Thus, it might not have been the dual identification fuelling the effect of negative outgroup attitudes but rather the rejection of the merged superordinate category including former outgroup members. This proposition should be tested in future research (see section 6.2.2).

Ingroup bias influenced individuals' attitudes towards the merger. However, once a positive attitude had emerged, it reduced ingroup bias and intergroup conflict. These attitudes, in turn, might have influenced the willingness to engage in the merged organisation and to behave in a way that influences merger success. This study provides first empirical evidence that ingroup bias is directly linked to organisational members' responses and attitudes towards an organisational merger and that ingroup bias and intergroup conflict can obstruct subjective evaluations of a merger. My results correspond to anecdotal evidence from Buono and Bowditch (1989) and others (Cartwright & Cooper, 1992; Marks & Mirvis, 1986). Intergroup conflict may account for failures of organisational change. The results of the present research accentuates that negative responses to a merger are likely to not only emerge from individual-level responses (Terry et al., 1996), but also as a consequence of group-level concerns.

5.6.2 Different functions of ingroup bias

To arrive at a broader understanding of ingroup bias within the context of a merger, I included judgemental and behavioural measures of bias. The present results revealed that these bias measures are differentially related to pre-merger identification and contact, but also to a positive stance on the merger. For example, in contrast to

⁹ According to IPM categorisation and identification are theoretical distinct constructs (Mummendey & Wenzel, 1999; see also Correll & Park, 2005). A negatively evaluated category does not necessarily reduce identification (Weber, Mummendey, & Wenzel, 2002; Wenzel et al., 2003) as is the case in the merger at hand; see section 6.2.1

judgemental bias, behavioural bias was not predicted by pre-merger identification. Additionally, whereas judgemental bias had a bidirectional relationship, changes in behavioural bias were influenced by a positive stance. Consequently, the tendency to allocate more resources to the ingroup than to the outgroup did not influence positive attitudes towards the merger. However, if a positive stance was apparent, the tendency of ingroup favouring resource allocation is diminished.

The different results of judgemental and behavioural ingroup bias suggest different functions of these types of ingroup bias in the merger context. Scheepers et al. (2006) studied different functions or motives underlying ingroup bias and differentiated between identity-based and instrumentally-based bias. Bias that serves an identity function is concerned with ensuring that the group is (positively) distinct from a comparison group. Bias that serves an instrumental function is concerned with and is displayed to achieve goals that are of interest to and associated with the ingroup (Spears, Jetten, & Scheepers, 2002). The identity-function of bias is mainly based on assumptions by SIA. The notion that ingroup bias can be instrumentally based has its origin in interdependence theories such as the RCT (Jackson, 1993; Sherif & Sherif, 1969).

The fact that pre-merger identification was related to changes in behavioural bias is similar to results reported by Duckitt and Mphuting (1998). They found that in times of intergroup conflict attitudes predicted identification but not vice versa. Duckitt and Mphuting argued that this is in line with assumptions from RCT, claiming that outgroup threat or competition creates hostility towards the outgroup which generates increased ingroup identification (LeVine & Campell, 1972; as cited in Duckitt & Mphuthing, 1998). Behavioural or instrumental-based bias serves the in-group's goal to accentuate differences between groups and to maintain or achieve an advantageous position as compared to a relevant outgroup (Scheepers, 2002; Scheepers et al., 2006).

To summarise, my results support the idea that ingroup bias may have different functions. The differences in relations among variables are in line with Scheepers' and colleagues (2006) approach distinguishing between identity- and instrumental-based biases. The present results underline the importance to distinguish between evaluative and behavioural bias and to focus on different underlying motivations. However, the issue of different functions of ingroup bias was approached in a rather exploratory manner. More experimental and longitudinal data will be needed to further pursue my research question. Additionally, a drawback of the present study is the use of a single

item measure concerning behavioural ingroup bias. Moreover, the measure's variance was comparably high, suggesting that one has to be cautious in interpreting the results. Future research should provide more reliable measures of behavioural ingroup bias to clearly examine similarities and differences of measures and functions of ingroup bias.

5.6.3 Conclusion

In regard to theory, the study tested causal relations among variables and provided first evidence that ingroup bias influences subjective indicators of merger success. Moreover, it is one of the few longitudinal studies investigating mergers from a social psychological perspective (see Amiot et al., 2006, in press). Theoretical constructs are applied to and tested in the field, thus enhancing their external validity. Additionally, first evidence is provided for the utility to differentiate social functions of ingroup bias in a merger context. On the practical level, managers and decision makers should recognise the intergroup dynamics involved in a merger and incorporate this knowledge throughout the implementation process. For example, the present study shows that intergroup contact is beneficial for positive attitudes concerning the merger. Thus, cooperative contact should be facilitated during a merger process.

6. General Discussion - Identification Processes and Intergroup Relations throughout a Merger

The objective of the present thesis was to investigate organisational members' reactions to change as result of a merger. How do people react when their own group's content and composition changes? How does that affect the extent to which they define themselves as members of the (new) group, and think as well as act in terms of that group membership? The goal was to understand how constructs from intergroup research contribute to explain resistance and support in a merger. Thereby, special emphasis was put on change and the dynamic nature of social psychological processes. I applied a longitudinal design to examine an ongoing higher education merger that involved a university and a polytechnic. This study focused on an intergroup perspective on mergers referring to a remark by James McKinsey (1929) who noted that an *esprit de corps* is important for merger success and that mergers are often accompanied by jealousy and rivalry between the involved organisations. The scope of the study was to extend previous intergroup research on mergers (e.g., Haslam, 2001; Terry, 2001) by understanding changing identification processes and intergroup relations as two aspects that play a key role in merger adjustment. More specifically, this was done by conducting a three-wave longitudinal study whereby theoretical approaches such as SIA and IPM were applied to a field setting, thus, strengthening their external validity but also disclosing their limits.

The overall research interest - how adjustment to and a positive stance on a merger develop - was converged from two directions. Therefore, in the first empirical chapter (chapter 4) two further research questions were posed: *What are the patterns of change in post-merger identification* and are there possible differences due to membership in the dominant or subordinate organisation? *Is post-merger identification related to pre-merger identification, ingroup typicality, and perceived fairness* as suggested by previous research (i.e., Amiot et al, 2006; van Knippenberg et al., 2002). In the second empirical chapter (chapter 5), I focused on intergroup relations and organisational members' response to a merger in terms of ingroup bias, and whether this influences their attitude towards the merger. Here, the overall research issue was expanded into two further questions, namely: *What are determinants of intergroup conflict and which role plays intergroup conflict in predicting positive attitudes towards the merger*. The main point here was to investigate change and stability as well as

testing directional relations between constructs. I presented empirical results from cross-lagged regression of ingroup bias on pre-and post-merger identification and intergroup contact as well as a positive stance on the merger.

The main results were discussed in the empirical chapters and will be summarised only briefly. The summarised results will be integrated to respond the overall research interest stated in chapter 3: *How does adjustment to and a positive stance on a merger develop?* Additionally, I focus on some general theoretical implications that arose throughout the research. Furthermore, I will discuss some limitations but also suggestions for future research. Lastly, practical implications are highlighted.

6.1 Discussion of results

In chapter 4, I examined patterns of change in post-merger identification. A multilevel model for change yielded that change in post-merger identification could be described as quadratic, hence decreased from Time 1 to Time 2 but increased from Time 2 to Time 3. Although I did not predict this non-linear change in identification, the result speaks to the fact that many motivational and behavioural processes exhibit differential rates of change (Cudek & Haring, 2007). This development was parallel for members of the dominant and subordinate organisations. Generally, post-merger identification was low, indicating that adjustment is difficult to achieve. To expand previous research, I analysed time-varying effects of pre-merger identification, ingroup typicality, and perceived fairness on post-merger identification. It was shown that the effects of pre-merger identification dissipated over time, whereas the effect of perceived fairness became more pronounced such that the more participants experienced fairness the more they identified with the newly merged organisation. Additionally, the relationship between ingroup typicality and post-merger identification remained unchanged over time. Interestingly, the effects of pre-merger identification and ingroup typicality on post-merger identification were different for members of the dominant and subordinate organisations. To retain, post-merger identification as well as the prediction by pre-merger identification and perceived fairness were influenced by time. These results point to the fact that predictive power of variables change over time, which was a long neglected aspect in social psychological research. That says, the relationships between constructs are time-varying. Therefore, it seems inappropriate to apply a

holochronic perspective, (i.e., a perspective independently of time-scales) when examining social psychological phenomena (see section 6.2.2 for further details).

I presented empirical results for cross-lagged effects of ingroup bias in chapter 5. Cross-lagged panel analysis indicated that pre-merger identification and contact at Time 2¹⁰ influenced changes in judgemental bias at Time 3 and that the relation between pre-merger identification and ingroup bias is bidirectional. Surprisingly, neither post-merger identification nor a dual identification, here high pre- and high post-merger identification, had any substantial effect on bias over time. This result was not expected when applying theoretical assumptions from CIIM (Gaertner, S. & Dovidio, 2000) or IPM (Mummendey & Wenzel, 1999). However, high pre-merger identification and low post-merger identification led to the highest amount of judgemental ingroup bias when analysed cross-sectionally, reflecting previous merger research (i.e., van Dick et al., 2004). These results were discussed in detail in section 5.6.1.

Importantly, I found a reciprocal relationship between bias and attitude towards the merger, indicating that the stronger the bias, the less favourable the attitude, and vice versa. From a theoretical point of view, the fact that judgemental and behavioural bias revealed different relations with the predictor and outcome variables was important. It was shown that bias may have differential functions and motives in a changing context (see section 5.6.2). Before the findings of chapter 4 and 5 are integrated to answer the overall research question stated in chapter 3, I want to introduce some limitations of the study that should be taken into consideration when evaluating the overall results.

6.1.1 Limitations

The data presented in this study were obtained from self-report measures that entail the danger of social desirability (Crowne & Marlowe, 1960). Additionally, the participants might have been influenced by their organisation's expectations and norms. Moreover, the same questionnaire was used in each wave, which could lead to common method variance between constructs (Kline, 2005). However, longitudinal relationships between variables are not affected by common method variance (Singer & Willet, 2003).

More problematic for interpreting the results may be the erosion or attrition rate in the present study. Almost 70% of participants dropped out between Time 1 and Time

¹⁰ That was labelled Time 1 in the previous empirical chapter.

3. The attrition led to cumulative nonresponse which greatly reduced the size of the final sample. Moreover, the drop-out analysis for both empirical parts revealed that participants who completed more than one questionnaire displayed higher levels of pre-merger identification and ingroup bias. A possible interpretation of this systematic drop-out is that only those participants who were attached to the pre-merger organisation and interested in its fate continued with the study. In terms of interpretation, I suspect that the reported findings from the present sample are slightly stronger than for those who dropped out. Therefore, it should be kept in mind that conclusions based on analyses conducted on a biased sample cannot be generalised to the target population (Taris, 2000).

A final aspect concerns the sample. The study was restricted to one particular merger process and a student sample. The data were collected throughout a university merger and it is debatable whether the findings can be generalised to other merger situations and to other organisational members. That is, the involved status groups within an organisation of higher education such as staff, academic staff, and students might experience change differently. Staff members might be confronted with fear of job loss, restructuring in organisational workflow and new senior management levels. Academic staff might experience change in terms of various roles and in administration, research, as well as in teaching. Moreover, students are only temporally members of the organisation, different from staff who might work in the same situation for years (for a case study on staff respondents, see Mills, Bettis, Miller, & Nolan, 2005). However, findings from previous research could be replicated in the present study suggesting some validation of past and present merger research. Further, the psychological processes involved in identification development should not differ for students and staff as shown by Mael and Ashforth (1992). Additionally argued Citra and Stuhlmacher (2001) that the psychological contract students have with their university is similar to the one staff have with their organisation.

6.1.2 Integration of results

Concluding from the summarised results and with the limitations in mind, the overall research goal stated in section 3.3 should be answered: *How does adjustment to and a positive stance on a merger develop?* Results from this longitudinal study revealed that adjustment in terms of increased post-merger identification is difficult to achieve. However, particularly the perception of a fair process and outcome becomes

important when predicting post-merger identification. Moreover, it was shown that ingroup bias is apparent in this “real merger” for both involved merger partners and that it is related to pre-merger identification and contact. Pre-merger identification fosters bias, whereas positive intergroup contact reduces bias. Ingroup bias is bidirectional related to a positive stance over the merger. Therefore, it influences bias and bias influences organisational members’ attitudes towards the merger.

I conceived the merger mainly as an intergroup situation and organisational behaviour as intergroup behaviour. It could be shown that group-based phenomena such as group identification, intergroup contact, and perceived justice are useful and important for understanding resistance or support throughout a merger. The effects of these variables, however, also depend on the specific merger characteristics and the time-scale. Still, James McKinsey (1929) proofed to be correct when he stated that one important problem is the development of a proper “*esprit de corps*” and those mergers are often characterised by rivalry.

Chapter 4 reports some insights in how the relation between an individual and her organisation are established. Following from this, I argued in chapter 5 that this established relation should in turn influence the intergroup relations. I found hints that these two aspects are important in a merger context and are interrelated, though this could not be approved longitudinally. Yet, to a certain degree the two concepts represent one aspect in the process of accepting organisational change. Post-merger identification resembles adjustment to the merger, which is also related to less intergroup rivalry (see section 5.5.3). However, one should act with caution in integrating the findings into one model without taking into account the role of time and change, as explained earlier. In fact, I assume that the constructs are not linearly and sequentially related but that they are to be integrated in a parallel process model (see Kessler & Mummendey, 2002 for a similar argument). A parallel process model establishes relations between variables that may depend on contextual and temporal circumstances (see sections 6.2.3 and 6.3).

Generally, the present thesis built on earlier research and integrated various aspects of an intergroup perspective on organisational mergers for answering the proposed research questions. Thereby, propositions from SIA, the group engagement, and intergroup contact model (among others, see chapter 4 and 5) could be confirmed. This is clearly speaking for the external validity of these social psychological approaches. In line with Pratt (2001), I conclude that the application of social

psychological models to the organisational setting broadens the theory and adds to the understanding of social psychological dynamics. Similarly, the appliance adds to clarification of organisational behaviour. Further theoretical, methodological, and practical implications from this study are discussed in the following sections.

6.2 Theoretical and Methodological Implications

6.2.1 Negative valence of the newly merged organisation

In both empirical chapters, I alluded to the IPM and the importance to integrate the notion of negatively evaluated categories.

Ingroup projection is the process of generalising ingroup attributes onto a superordinate category. Because the attributes of the superordinate category are used to evaluate a relevant outgroup (Turner et al., 1987), a more prototypical perception of the ingroup with regard to the superordinate category should lead to more devaluation of an outgroup (Mummendey & Wenzel, 1999). Previously, aspects of the IPM were tested in the field of mergers using an experimental approach (Giessner & Mummendey, in press) and correlative field studies (Tischendorf, 2007). However, especially in the field studies it became apparent that in a merger situation the newly merged organisation, here defining the superordinate category, is often negatively evaluated. This is a relevant finding, as the valence of the superordinate category was found to moderate ingroup projection processes (see Wenzel et al., 2003, Study 3) which demonstrated the context-dependence of the construal of relations between ingroup and the inclusive category. The negative evaluation of the superordinate category may lead to ingroup distancing instead of ingroup projection, and the perception that the outgroup is relatively more prototypical than the ingroup (Tischendorf, 2007). Consequently, high pre-merger identification and low post-merger identification led to more discrimination (5.6.2), and not dual (high) identification, as originally assumed in the IPM (Waldzus et al., 2003).

What is important in this regard is to disentangle the concepts of identification and evaluation or valence of the superordinate category. A basic assumption derived from SCT and incorporated in the IPM is the notion that ingroup and outgroup are evaluated in terms of their relative prototypicality for a *salient* inclusive self-category (Turner et al., 1987). Theoretically, superordinate categories tend to be positively evaluated, although it is not necessary to consider them as a relevant and salient category (Wenzel et al., 2003). The question is whether individuals will identify with a

negatively evaluated superordinate category? Wenzel et al. (2003) showed that those participants primed with a negatively evaluated superordinate category compared with those primed with a positively evaluated category did not differ in identification with the superordinate category (see also Mlicki & Ellemers, 1996). Still, in the present study, participants identified only weakly with the newly merged organisation.¹¹

These contracting results lead to the question what is meant by identification. Tajfel (1981, as cited in Jackson, 2002) postulated a three-dimensional conceptualisation of group identity consisting of a cognitive (knowledge of group membership), an evaluative (value of group membership), and an affective component (emotional significance of group membership). In a merger situation, organisational members might share the knowledge that they are part of a group (the newly merged organisation); hence the cognitive component is given. However, they might have the impression that this membership is imposed and they are forced to be part in this group, inhibiting a positive evaluation and affective bond with this category (see categorisation threat, Branscombe et al., 1999; section 5.6.1). Therefore, the effects of the negative evaluated category might have different influences on the cognitive as well as on the evaluative and affective component of identification. That is, differences in empirical results could depend on which aspects of identification were measured.

To make further theoretical assumptions on this issue it might be useful to consider an approach by Correll and Park (2005). The authors asked why groups are needed, thus examining the function or utility of groups. The key concept is the psychological utility of the ingroup defined as a group's internal, psychological impact on the self-concept. The psychological utility of a membership in a social group is determined by perceived value (\approx valence), identification¹², and entitativity¹³. In this regard the variable of psychological utility may reach positive, negative, or neutral values. Groups with positive utility value should affirm their individual members in their sense of self-worth. On the other hand, being member of a group with a negative value is assumed to be threatening for self-worth. In response, an individual may be motivated to reduce the group's impact on her self-worth by reducing either identification or perceived entitativity. In the present study individuals might have been

¹¹ However, as I did not measure valence of the superordinate category, all theoretical reconsiderations are limited until empirically tested.

¹² Correll and Park (2005) defined identification as independent from the evaluative component, which is only in terms of the knowledge of group membership and self-relevance.

¹³ Entitativity defines groups that evoke a sense of continuity and coherence. Campell (1958, as cited in Correll and Park, 2005) proposed four components that contribute to a group's entitativity: proximity, similarity, common fate, and continuation.

motivated to lessen identification with the post-merger group due to a negative evaluation of the newly merged organisation. Additionally, they might have reduced the perception of entitativity in terms of the newly merged organisation that includes also former outgroup members. Identification-based responses are marked by disidentification and the psychological distancing from the negative evaluated category.

In general, the approach by Correll and Park (2005) is valuable as it distinguishes the concepts of group value or valence and identification. Moreover, it might explain the process of ingroup distancing (instead of ingroup projection) and the finding of the present study that high pre-merger identification and low post-merger identification led to an increase in bias. The negative value of the superordinate group may lead to a negative psychological utility that in turn fosters ingroup distancing to restore self-worth. Therefore, the concept of psychological utility might explain the mechanism by which negative valence of the superordinate category leads to ingroup distancing instead of ingroup projection. An integration of the Model of Ingroup as a Social Resource by Correll and Park (2005) and the IPM might be useful to account for underlying processes and functions of an ingroup and a superordinate category. To further elaborate on this point, more empirical research is needed

6.2.2 Temporal matters and change in social psychology

In the introduction as well as in the empirical chapters I focused on the role of time and change both in theoretical as well as in methodological terms. In the present study time was included as a predictor variable and it was additionally shown that some predictive effects changed over time. This result alluded that social psychological concepts do not generally persist over time (see also West et al., 2004). In chapter 5, I examined more thoroughly aspects of causality. Altogether the present thesis should be seen as one attempt to include time as a central (theoretical) variable. Thereby I took into account development and growth (Zaheer et al., 1999) as well as issues of causality (Mitchell & James, 2001).

To further improve social psychological and especially SIA theorising, we should aim to formulate hypotheses about short- and long-term effects of variables. Whereas the present research was rather explorative in examining temporal matters, social psychology theorist should develop a *time scale theory*. To do so, Zaheer and colleagues (1999) proposed to investigate patterns of temporal relationships between variables. Varying time scales should be used to understand possibly different patterns

and to account for differential temporal relationships between variables. To exemplify this idea, reconsider the relationship between pre- and post-merger identification as outlined in chapter 4. At time 1, two months after the merger was implemented, I found a positive relationship between the two variables. Six months later, this relationship dissipated. I observed two different patterns of the relationship at two differential time scales. The *sense of continuity hypothesis* as proposed by van Knippenberg and colleagues (2002) seemed to hold only for the first observation. Hence, the theoretical model does not hold over time and requires revision for effectively describing the relation between pre- and post-merger identification (see section 4.5.1). A similar result was reported in chapter 5 (section 5.5.4). Consistent with assumptions from the CIIM, post-merger identification correlated negatively with ingroup bias. Yet, the longitudinal relation over six months was not significant and close to zero. As well as in the first example, a holochronic hypothesis across constructs seemed to be inaccurate, and a modification of the theory seems warranted.

The results at hand demonstrated that if we include time and/or if we analyse stability and change, the used theoretical models are limited in a certain sense. However, the present study can only be regarded as the first step to take time-scales into consideration in social psychological research. The second step should be to systemise and generalise the found effects for enhancing current social psychological models. Some ideas for future research will be scribed in the next section. Yet, some methodological concerns will be discussed beforehand.

6.2.3 Longitudinal methods of analysis

The choice of a statistical model should depend on the theoretical question of interest and the perspective under which change and causation is examined (Curren & Bollen, 2001). In chapter 4, I applied a multilevel model for change to examine effects of growth and development. In chapter 5 the focus was on stability and change and the test of directional effects. Therefore, I adopted a cross-lagged panel analysis, which belongs to the family of autoregressive approaches.

Both methods, HLM and LGC vs. autoregressive approaches, have a clear advantage as they adequately provide answers to a specific question. However, both have the disadvantages to focus on only one side or aspect of change.

First, autoregression or cross-lagged approaches model only fixed effects, thus do not allow for a conclusion about intra-individual change. Second, change is only

indirectly assessed (as the cross-lagged effect) but mean level differences are not taken into account. Third, change is often only assessed between two measurement points (t1 and t2 or t2 and t3) and as independent of previous or later developments (Christ et al., 2006). The biggest disadvantage of HLM and LGC is that they do not provide information about causality or directional effects. They neglect lagged and cross-lagged effects (Christ et al., 2006).

To summarise, I focused on two different aspects of change (i.e., growth and causality) in the present research. I went beyond a simple *A-causes-B* description and aimed at understanding changes in A and B as well as possible changes in the relationship between A and B as outlined by Mitchell and James' (2001). However, these concerns of growth on the one hand and causality on the other hand have been examined independently of each other in the present study.

Lately, Bollen and Curran (2004) provided a framework to integrate these aspects of change and longitudinal methodology. This approach is relatively new and makes high demands in terms of data structure, as described below, which detained the use of this method for the present study. Nevertheless, I will introduce Bollen and Curran's idea in the following and suggest applying it in future research.

Bollen and Curran (2004; Curran & Bollen, 2001) developed the *autoregression latent trajectory model* (ALT) to combine "the best of two worlds" (Curran & Bollen, 2001). This model provides the possibility to examine different change processes simultaneously. The ALT approach expresses the relations among the repeated measures as an additive combination of the influences from the underlying growth trajectories plus a contribution from the time specific repeated measure. Figure 6 exemplifies the structure of an ALT model.

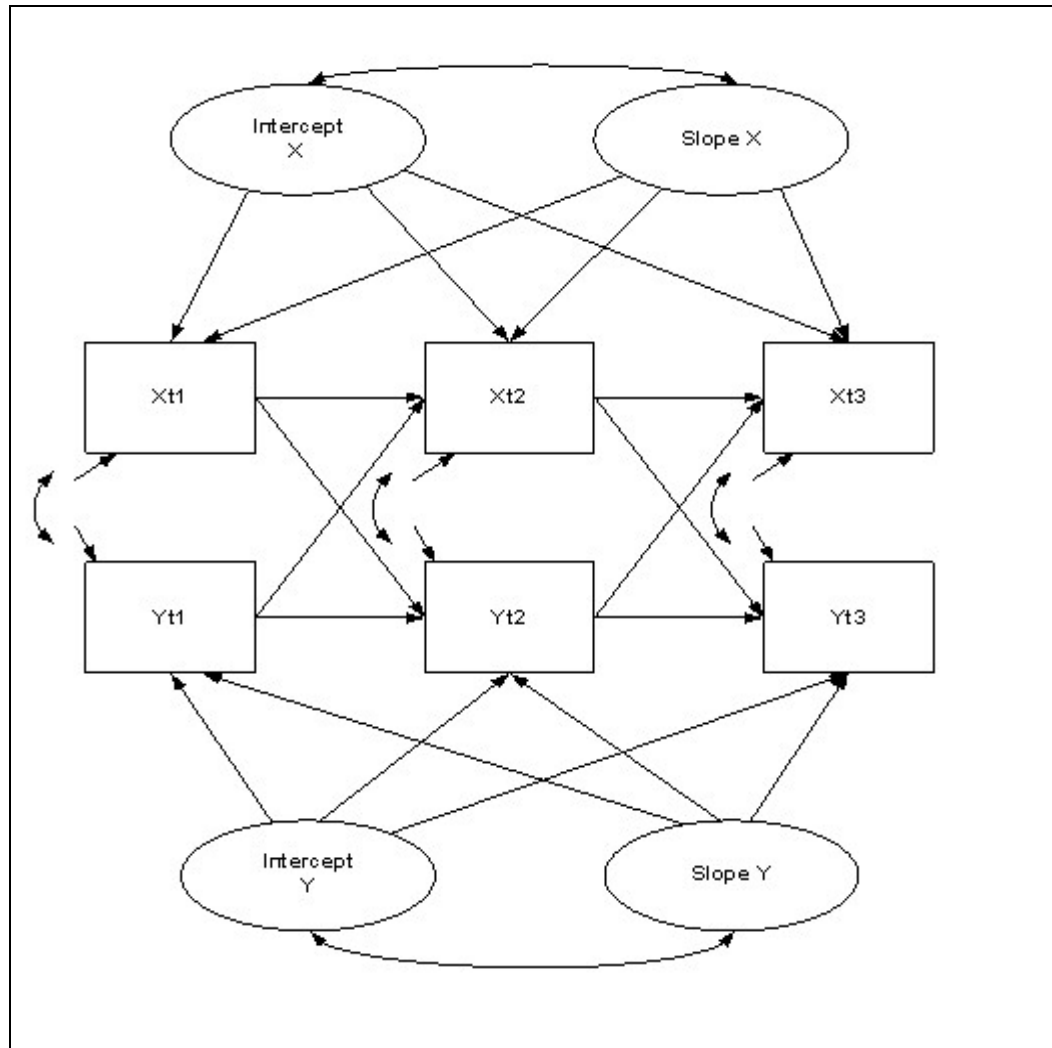


Figure 6. Multivariate ALT model (adapted from Christ et al., 2006).

The model shows that a given measure of X is an additive combination of the continuous growth underlying X . The intercept represents the starting point (mean of X at Time 1) and the slope models the rate of growth over time. These latent variables influence X at each time point, as normally modelled in a growth model. However, X is additionally modelled as a time-adjacent comparison among the repeated measures of X , as traditionally modelled in an autoregression model. Importantly, any given value of X is influenced by the preceding measure of Y and a time-specific random disturbance. It should become clear that this kind of model allows simultaneously inferring the individual underlying growth and the time specific autoregressive structure (Curran & Bollen, 2001; Bollen & Curran, 2004 for a detailed explanation of ALT).

The approach provided by Curran and Bollen has the potential to overcome some of the disadvantages in longitudinal methods and their application. However, one of the biggest problems with ALT models is the required data specifications. Ideally,

five waves are necessary to specify an ALT model without making further assumptions or implementing restrictions (Bollen & Curran, 2004). In addition, as with all complex SEM models, a sufficient sample size is required ($N > 200$). A small number of repeated measures and a modest to small sample size limit the accuracy of the statistical model (Burchinal et al., 2006; Kline, 2005).

The present study did not provide a sufficient data basis for applying an ALT model. Critical measures were only assessed at two time points (see chapter 5) and the sample size was comparably small for testing a complex model. The small sample size in the present study ($N = 157$) is clearly a limitation (see section 6.1.1). However, future research should be designed to apply autoregression latent trajectory models to further explore the nature of development and causality simultaneously.

6.3 Suggestions for future research

The analysis of change over time is relatively new to social psychology and social identity research. It has led me to the conclusion that models of when and how identification develops and how it changes over time are missing in social identity theorising, as mentioned above. Since social identities are increasingly in flux in today's world, it is essential to account for this flexibility in future research. Therefore, it is important to develop a new line of research that aims at investigating how identification with (multiple) categories is influenced by contextual and temporal change. What leads people to dis-identify with one category (e.g., pre-merger university) and to identify with another one (e.g., merged organisation)? Especially, which processes lead to identification with a new, often imposed, category? What leads to identity formation in times of change? Do people perceive their current social identities as congruent with a future (possible) identity? As outlined in the Chapter 4, previous research has focused mainly on one side of this question by showing that organisational change usually involves resistance and has negative effects on well-being (e.g., Amiot et al., 2006). However, research has looked less on the process by which group members integrate diverse and complex social identities, and how those new identities are incorporated in the self. This, for example, involves the question how people construe future selves (Markus & Nurius, 1986), how they create meaning so that a new category serves fundamental identity motives such as continuity, self-esteem enhancement, and uncertainty reduction. It raises the question whether the perceived discrepancy between the present identity and a future possible identity might reduce well-being as well as

increases negative attitudes towards other groups (Brewer & Pierce, 2005). Hence, future research should connect classic research on social identity (Tajfel & Turner, 1986) to more recent work on motives for the construction and maintenance of identities (Vignoles et al., 2006). A further integration of ideas about temporal construal (Trope & Liberman, 2003), self-concept (Markus & Wurf, 1987), and organisational change (Haslam, 2001) could be fruitful.

This study alludes to another suggestion for future research, namely the integration of various methods. Beside field studies with their apparent disadvantages (e.g., social desirability, response rate), experimental designs that examine causal relations in a controlled setting might be useful (see Schweiger & DeNisi, 1991). Particularly, I would like to put an emphasis on longitudinal experimental designs. Herein, each participant is given treatment and then measured on the outcome variable at multiple time points. The focus is on longer-term changes in the treatment effect and the processes related to the development of an outcome over time (West et al., 2004). Such an approach would be especially interesting because it allows understanding time lags (see section 6.2.3) and causal relations. As I previously pointed out, future research should focus on the sensitivity of time lags to capture the underlying longitudinal processes and to test time-dependent theories. Additionally, research can be expanded by experimental simulations or computational models that can test a wide range of hypotheses implied by theoretical assumptions that would be difficult to test otherwise (McGarth, Arrow, & Berdahl, 2000).

As mentioned above, the present results stem from a specific merger situation and to further improve the generalisation and external validity, results should be verified in different settings. Furthermore, previous research (Amiot et al., 2006; Giessner et al., 2006) provided evidence that variables such as merger patterns and event characteristics are crucial to understand merger processes. In one example for continuative research, Taeuber, Gleibs, and Viki (2007) showed with two experimental studies that merger support relies on a fit between announced merger pattern and desired merger pattern, independent of organisational dominance. Hence, the psychological processes that take place throughout a merger depend on the kind of merger. Therefore, the merger research could be enriched by specifying determinants of the generalisability (i.e., other kind of groups, kinds of merger, and structural relations between variables).

For a comprehensive understanding of a merger, which was not the overriding goal of this study, individual and group-based variables should be included (see also

Klendauer et al., 2006). The focus on stress-related variables seems to be fruitful, especially in combination with intergroup related variables (Amiot et al., 2006; Greitemeyer, Fischer, Nürnberg, Frey, & Stahlberg, 2006) but also when focusing on individual performance after a merger. Individual performance can be understood as another outcome variable and might be useful when evaluating the success of a merger. Weiß et al. (2007) could for example show that a school merger was related to students' school performance. Post-merger identification, for example, was positively correlated with increases in school performance.

Another interesting route for future research would be to focus on parallel process models instead of sequential and linear models (see section 6.1.2). The interrelations between reported concepts could be integrated and analysed in connectionist or parallel distributed processing models. Such a model can be described as representing concepts operating like schemas that reconstruct relations between each other on the basis of accessible knowledge rather than on retrieval of static representations. Such a model would be more flexible and context-sensitive in nature and may be suitable to account for the time- and context-dependent interrelations (Smith, 1996).

6.4 Linking Theory and Practice

6.4.1 Managing mergers

The practical implications and recommendations implied by the present thesis have to be considered in relation to the limitations described above. Yet, some recommendations for leaders and human resource managers (HR managers) as well as for possible interventions can be made.

Firstly, it is important to create awareness of group-level phenomena and their effect on merger success. Psychological preparation for a merger means raising awareness of the “normal” reactions of fusion partners. These reactions could imply strong intergroup rivalry, resistance, stress-related symptoms, and absenteeism (Marks & Mirvis, 2001).

Leaders and managers need to be competent and trained in the process of transforming organisations (Kavanagh & Ashkanasy, 2006). Training for leaders and HR managers should highlight the importance of organisational identification and structural relations between groups (such as status differentials), the need for positive distinctiveness, and the aftermath of identity threat. Moreover, such training should

provide information about the time perspective, about the stages mergers take, and the role of psychological processes (Seo & Hill, 2005). For example, the knowledge that at the beginning of the merger process, pre-merger identity is salient and that a merger poses threat to this identity might be helpful to reduce resistance and stress at an early stage. Pre-merger preparation grooms people to move forward in their personal and organisational transition. Additionally, pre-merger preparation helps to understand dynamics that take place as the merger partners come together before it actually happens. Therefore, it is useful for further managing the transition to a unified post-merger organisation (Marks & Mirvis, 2001).

In the present study, perceived fairness (section 4.5.1) and intergroup contact (section 5.6.1) were particularly beneficial for merger adjustment. Therefore, these two concepts might be especially useful in interventions. The first question, however, is how to foster the perception of fairness? First, it is advisable to explain why the merger and the integration of organisations are useful. Second, the perception of a fair process is enhanced if the merger process is of voluntary nature. Further, the merger should be implemented in a way that balances integration and change for both merger partners (Marks & Mirvis, 2001). Practically relevant in this regard might be a finding by Taeuber and colleagues (2007) who could show that a merger is supported if a desired merger pattern fits the “real” announced pattern. Therefore, before the actual merger is implemented, it may be useful to discuss the best way of merging (Marks & Mirvis, 2001) and put a special emphasis on the decision making process and the participation of all organisational members. Moreover, communication should be as transparent as possible. As a result, organisational members should be allowed a say in matters that affect them, to speak out their needs and ideas, to pose questions, and to declare disagreement during the implementation process. Transparent communication as a top-down and participation as a bottom-up process should facilitate fairness perception. This fits with research showing that individuals tend to perceive an unfavourable outcome as fair as long as they evaluate the decision making process as legitimate (Greenberg, 1987; Lipponen et al., 2004). Similarly, Schweiger and DeNisi (1991) showed that communication significantly decreased uncertainty and those organisations that communicate caring and concern to their members, increased commitment and willingness to engage in change processes (but see Kramer, Dougherty, & Pierce, 2004). Thus, one intervention strategy should be to provide information and to

communicate merger plans carefully and transparently. This could happen through regular information meetings, newsletters, or workshops.

In this thesis it was moreover shown that positive contact decreased ingroup bias and increased a positive stance on the merger. Hence, one possible intervention could be to promote positive intergroup contact. This could be done by facilitating information meetings, workshops, common classes and courses, thus creating situations that establish contact between organisational members. Interventions should be tailored in such a way that they bring people together to negotiate about goals, issues, and similarities. Especially promising might be to stress common goals and positive interdependence (see also Sherif & Sherif, 1953; Sherif, 1966a, 1966b). One attempt to do so, going beyond pure contact, was proposed by Haslam et al. (2003). The model for Actualization Social and Personal Identity Resources (ASPIRe) incorporates four phases of information gathering and group participatory goal setting, through which shared values and goals are emphasised. On a lower level (here, the pre-merger intergroup setting) diversity and differences are accepted (for a detailed description see Eggins, Reynold, & Haslam, 2003; Haslam et al., 2003).

In general, knowledge about group-based reactions throughout merger processes should become an integral part in human resource management and post-merger integration.

6.4.2 Merging divergent campuses - challenges for higher education leaders

Mergers in the higher educational sector are, at least in Germany, relatively new and the present study, embedded in previous research, provides insights into managing future mergers. The above mentioned recommendations for managing mergers also apply for educational mergers. However, from international experience it is known that especially vertical or cross-sectoral mergers are difficult to manage (Harman, 2002) and I want to mention some crucial concerns when dealing with higher education mergers.

Attempts to merge different higher educational institutions include the integration of not only the different organisational cultures¹⁴ but also the academic cultures. Harman (2002) defines academic culture as:

[...] historically transmitted patterns of meaning expressed in symbolic form through shared commitment, values, and standards of behaviour peculiar to

¹⁴ Organisational culture refers to elements that are shared by members of the organisation and those hold deep symbolic significance and influence behaviour (A.M. Pettigrew, 1979).

members of the profession, as well as traditions, myth, rituals, language, and other forms of expressive symbolism that encompass academic life and work. (p.97)

Hence, the integration of academic cultures seems to be one important challenge for higher education leaders. For instance, universities and polytechnics diverge in teaching and research obligations. Whereas universities generally have a strong research culture and less value is ascribed to teaching, teaching is highly valued in polytechnics. To manage these differences, conditions, and policies need to be worked out that enable professional development in both areas. Common goals, as a means to improve intergroup relations, should entail a common academic program and the improvement of teaching as well as resources and staffing matters (Harman, 2002).

Mergers are often of involuntary nature, which is especially connected with stress, fear, and inadequate planning (Skodvin, 1999). Forced mergers seem to disregard the degree to which a transition satisfies the organisational members' needs. Moreover, involuntary mergers are characterised by top-down processes. As stated earlier, this might particularly trigger perceptions of unfairness and resistance, negatively influence merger support, and impede a positive stance on the merger. Hence, within the legal regularities, mergers should be implemented with a high degree of openness, autonomy, and strategic planning. Whenever possible educational authorities should try to delegate decisions to the institutions themselves.

To summarise, a big challenge for managers of change in (higher education) institutions is to promote positive force and identification while at the same time deal with resistance. Moreover, they are required to create an organisation that provides its members with the basis for feeling committed and happy to be part of.

6.5 Concluding Remarks

The present study adds to a growing body of research that aims at understanding the psychological costs of organisational mergers, and to eventually develop means to reduce those costs. The results showed that we can be somehow optimistic about the potential to diminish negative group-based reactions to mergers, especially when taking into account the role of perceived fairness and intergroup contact.

On the other hand, the present study also indicated the difficulties inherent in a merger. For example, post-merger identification, as an indicator for merger adjustment,

increased only slowly. And ingroup bias, defined as a proxy for rivalry between the merger partners, was still vivid after one year into the merger process. The present research affirmed that a merger is a significant event and involves considerable human costs (Harman & Harman, 2003).

It alludes to the fact that this kind of organisational change imposes a high amount of perils. These are not only symbolic concerning groups' distinctiveness, values, norms, and standards (Stephan & Stephan, 2000) but realistic threats about scarce resources such as jobs and financial resources. Managing mergers, therefore, means managing threats and requires the provision to reduce threats. Managers should not forget that the inclusion of the human factor (Cartwright & Cooper, 1992) entails handling human beings with feelings and needs. Therefore, if organisations have to merge, they should aim at merging right (Ullrich & van Dick, in press). From my point of view, merging right comprises to take the fears and threats experienced by organisational members seriously and to enlist them as much as possible in the merger process. Moreover, one should bear in mind that a merger succeeds not only at the management level, or in respect to the government level in the case of state-initiated merger, but also for the employees and other organisational members. Thus, the ultimate outcome implies not only financial success but well-being of organisational members. The newly merged organisation should provide all organisational members with the potential of a positive self-concept. In this sense, managing a merger right connotes *managing opportunities*, for all involved organisational members.

References

- Abrams, D., & Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology*, 18, 317-334.
- Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Allport, F. L. (1924). The group fallacy in relation to social science. *Journal of Abnormal Psychology and Social Psychology*, 19, 60-73.
- Allport, G. W. (1954). *The Nature of prejudice*. Reading, MA: Perseus Books.
- Amiot, C., Terry, D., Jimmieson, N. L., & Callan, V. J. (2006). A longitudinal investigation of stress and coping processes during an organisational merger: Implications for job satisfaction and organisational identification. *Journal of Management*, 32, 552-574.
- Amiot, C., Terry, D., & Callan, V. J. (in press). Status, equity, and social identification during an intergroup merger: A longitudinal study. *British Journal of Social Psychology*.
- Ancona, D.G., Okhuysen, G. A., & Perlow, L.A. (2001). Taking time to integrate temporal research. *Academy of Management Review*, 28, 512-529.
- Arbuckle, J. L. (2003). Amos 5 [Computer software]. Chicago, IL: SmallWaters.
- Arrow, H., Poole, M. S., Henry, K. B., & Moreland, R. L. (2004). Time, change, and development. The temporal perspective on groups. *Small Group Research*, 35, 73-105.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14, 20-39.

- Bartels, J., Douwes, R., de Jong, M., & Pruyn, A. (2006). Organizational identification during a merger: Determinants of employees' expected identification with the new organization. *British Journal of Management*, 17, 49-67.
- Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., Mummendey, A., et al. (2007). *Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis in three European countries*. Manuscript submitted for publication.
- Boen, F., Vanbeselaere, N., & Cool, M., (2006). Group status as a determinant of organizational identification after a take-over: A social identity perspective. *Group Processes and Intergroup Relations*, 9, 547-560.
- Boen, F., Vanbeselaere, N., Brebels, L., Huybens, W., & Millet, K. (in press). Post-merger identification as a function of pre-merger identification, relative representation and pre-merger status. *European Journal of Social Psychology*.
- Boen, F., Vanbeselaere, N., Hollants, K., & Feys, J. (2005). Predictors of pupils' and teachers' identification with a merged school. *Journal of Applied Social Psychology*, 35, 2577-2605.
- Bollen, K., & Curran, P. (2004). Autoregressive Latent Trajectory (ALT) Models: A synthesis of two traditions. *Sociological Methods and Research*, 32, 336-383.
- Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999). The context and content of social identity threat. In N. Ellemers, R. Spears & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 35-58). Oxford: Blackwell.
- Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive motivational analysis. *Psychological Bulletin*, 86, 307-324.
- Brewer, M. B., & Brown, R. J. (1998). Intergroup relations. In D.T. Gilbert & S. T.

- Fiske (Eds.), *Handbook of social psychology, Vol. 2 (4th ed.)* (pp. 554-594). McGraw-Hill.
- Brewer, M. B., & Miller, N. (1984). Beyond the contact hypothesis: Theoretical perspectives on desegregation. In N. Miller & M. Brewer (Eds.), *Groups in contact: The psychology of desegregation*. New York: Academic Press.
- Brewer, M. B., & Pierce, K. P. (2005). Social identity complexity and outgroup tolerance. *Personality and Social Psychology Bulletin, 31*, 428-437.
- Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. In M.P. Zanna (Ed.), *Advances in experimental social psychology, Vol. 37* (pp. 255-343). Elsevier Academic Press.
- Brown, R. (2000). Social identity theory: Past achievements, current problems and future challenges. *European Journal of Social Psychology, 30*, 745-778.
- Buono, A. F., & Bowditch, J. L. (1989). *The human side of mergers and acquisitions: Managing collisions between people, cultures, and organizations*. San Francisco: Jossey-Bass.
- Burchinal, M., Nelson, L., & Poe, M. (2006). IV. Growth curve analysis: An introduction to various methods for analyzing longitudinal data. *Monographs of the Society for Research in Child Development, 71*, 65-87.
- Byrne, B.M. (2004). Testing for multigroup invariance using AMOS Graphics: A road less travelled. *Structural Equation Modeling: A Multidisciplinary Journal, 11*, 272-300.
- Campell, D. T. (1965). Ethnocentric and other altruistic motives. In D. Levine. (Ed.), *Nebraska Symposium on Motivation* (pp. 283-311). Lincoln: University of Nebraska Press.
- Cartwright, S. (2005). Mergers and Acquisitions: An update and appraisal. In G.P.

- Hodgkinson & J.K. Ford (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 1-38). Chichester: John Wiley.
- Cartwright, S., & Cooper, C.L. (1992). *Mergers & acquisitions. The human factor*. Oxford: Butterworth-Heinmann.
- Cartwright, S., & Cooper, C. L. (1995). Organizational marriage: 'hard' versus 'soft' issues? *Personnel Review*, 24, 32-42.
- Cartwright, S., & Cooper, C. L. (1994). The human effects of mergers and acquisitions. In C.L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behaviour* (pp. 47-61). New York: Wiley.
- Cartwright, S., & Schoenberg, R. (2006). Thirty years of mergers and acquisitions research: Recent advances and future opportunities. *British Journal of Management*, 17, 1-5.
- Chantelau, F. (2006). *Die Fusion der Universität Lüneburg und der FH Nordostniedersachsen und Gestaltung einer gemeinsamen Hochschulverwaltung* [The merger between the University Lüneburg and Polytechnic Nordostniedersachsen and the restructuring of their administrations]. Retrieved March 14, 2007, <http://www.his.de/publikation/seminar/Synergie/chantelau.pdf>
- Chreim, S. (2002). Influencing organizational identification during a merger: A communication-based perspective. *Human Relations*, 55, 1117-1137.
- Christ, O., Schmidt, P., Schlüter, E., & Wagner, U. (2006). Analyse von Prozessen und Veränderungen: Zur Anwendung autoregressiver latenter Wachstumskurvenmodelle. [Analysis of processes and change: Application of autoregression latent growth modeling]. *Zeitschrift für Sozialpsychologie*, 37, 173-184.
- Citera, M., & Rentsch, J. R. (1993). Is there justice in organizational acquisitions? The

- role of distributive and procedural fairness in corporate acquisitions. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 211-230). Hillsdale, NJ: Lawrence Erlbaum.
- Citera, M., & Stuhlmacher, A. F. (2001). A policy-modeling approach to examining fairness judgments in organizational acquisitions. *Journal of Behavioral Decision Making, 14*, 309-327.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Mahwah, NJ: Erlbaum.
- Colquitt, J., Conlon, D., Wesson, M., Porter, C., & Ng, K. (2001). Justice at the millenium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology, 86*, 425-445.
- Condor, S. (1996). Social identity and time. In W.P. Robinson (Ed.), *Social groups and identities. Developing the legacy of Henri Tajfel* (pp. 285-315). Oxford: Butterworth.
- Cook, T.D., & Campell, D.T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Bosten, MA: Houghton-Mifflin.
- Correll, J., & Park, B. (2005). A model of the ingroup as a social resource. *Personality and Social Psychology Review, 9*, 341-359.
- Crisp, R. J., Walsh, J., & Hewstone, M. (2006). Crossed categorization in common ingroup contexts. *Personality and Social Psychology Bulletin, 32*, 1204-1218.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*, 349-354.
- Cudek, R., & Harring, J.R. (2007). Analysis of nonlinear patterns of change with random coefficient models. *Annual Review of Psychology, 58*, 615-637.

- Curran, P.J., Bauer, D.J., & Willoughby, M.T. (2006). Testing and probing interactions in hierarchical linear growth models. In C.S. Bergman & S.E. Boker (Eds.), *The Notre Dame Series on Quantitative Methodology, Volume 1: Methodological Issues in Aging Research* (pp. 99-129). Mahawah, NJ: Lawrence Erlbaum Association.
- Curran, P. J., & Bollen, K. A (2001). The best of two worlds. Combining autoregressive and latent curve models. In L. Collins and A. Sayer (Eds.), *New Methods for the Analysis of Change*. (pp 107-35) Washington, DC: American Psychological Association.
- Doise, W. (1978). *Groups and individuals: Explanations in Social Psychology*. Cambridge: Cambridge University Press.
- Doosje, B., Ellemers, N., & Spears, R. (1995). Perceived intragroup variability as a function of group status and identification. *Journal of Experimental Social Psychology*, 31, 410-436.
- Duckitt, J., & Mphuthing, T. (1998). Group identification and intergroup attitudes: A longitudinal analysis in South Africa. *Journal of Personality and Social Psychology*, 74, 80-85.
- Durkin, K. (1995). *Developmental social psychology. From infancy to old age*. Malden, MA: Blackwell.
- Eggins, R. A., Haslam, S. A., & Reynolds, K. J. (2003). Working with identities: The ASPIRe model of organizational planning, negotiations, and development. In S. A. Haslam, D. van Knippenberg, M. P. Platow, & N. Ellemers, (Eds.), *Social identity at work. Developing theory for organizational practice*. (pp. 241-261). New York, Hove: Psychology Press.
- Eisenbeiss, K., & Otten, S. (2005). *A dynamic perspective on social identification: Predictors and consequences of identification during group formation*. Unpublished Manuscript, University of Jena.

- Ellemers, N. (1993). The influence of socio-structural variables on identity management strategies. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (pp. 27-57). Chichester: John Wiley & Sons.
- Ellemers, N., Haslam, S. A., Platow, M. J., & van Knippenberg, D. (2003). Social identity at work: Developments, debates, directions. In S. A. Haslam, D. van Knippenberg, M. P. Platow, & N. Ellemers, (Eds.), *Social identity at work. Developing theory for organizational practice*. (pp. 241-261). New York, Hove: Psychology Press.
- Eller, A., & Abrams, D. (2003). 'Gringos' in Mexico: Cross-sectional and longitudinal effects of language school-promoted contact on intergroup bias. *Group Processes and Intergroup Relations*, 6, 55-75.
- Eller, A., & Abrams, D. (2004). Come together: Longitudinal comparisons of Pettigrew's reformulated intergroup contact model and the Common ingroup identity model in Anglo-French and Mexican-American contexts. *European Journal of Social Psychology*, 34, 229-256.
- Ernst & Young (2006, September). *Handeln wider besseren Wissens. Warum viele Transaktionen scheitern, ohne es zu müssen* [Act although you know better. Why many transactions fail, although they do not have to]. Retrieved December 12, 2006, from the Ernst & Young Web site: http://www.ey.com/GLOBAL/content.nsf/Germany/Publikationen_-_Studien_-_2006 [On-line].
- Ethier, K. A., & Deaux, K. (1994). Negotiating social identity when contexts change: Maintaining identification and responding to threat. *Journal of Personality and Social Psychology*, 67, 243-251.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.

- Fugate, M., Kinicki, A.J., & Scheck, C.L. (2002). Coping with an organizational merger over four stages. *Personnel Psychology*, 55, 905-928.
- Gaertner, L., & Insko, C. A. (2000). Intergroup discrimination in the minimal group paradigm: Categorization, reciprocation, or fear? *Journal of Personality and Social Psychology*, 79, 77-94.
- Gaertner, S., & Dovidio, J. (2000). *Reducing intergroup bias: The common ingroup identity model*, (pp. 33-51). Ann Arbor: Tyler & Francis.
- Gaertner, S., Dovidio, J. F., & Bachman, B. A. (1996). Revisiting the contact hypothesis: The induction of a common ingroup identity. *International Journal of Intercultural Relations*, 20, 271-290.
- Gaertner, S., Dovidio, J. F., Anastasio, P. A., Bachman, B. A., & Rust, M. C. (1993). The common ingroup identity model: Recategorization and reduction of intergroup bias. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology*, (pp 1-26). Chichester: John Wiley & Sons.
- Garcia-Marques, L., Santos, A. S., & Mackie, D. M. (2006). Stereotypes: Static abstractions or dynamic knowledge structures? *Journal of Personality and Social Psychology*, 91, 814-831.
- Giessner, S. R. (2003). Eine Intergruppenperspektive auf Unternehmensfusionen [A intergroup perspective on corporate mergers]. In J. Straehle (Ed.), *Interkulturelle Mergers & Acquisitions. Eine interdisziplinäre Perspektive* (pp. 168-194). Sternenfels: Verlag Wissenschaft & Praxis.
- Giessner, S. R. (2004). *United we run, divided we fail? Effects of cognitive merger representations and performance feedbacks on merging groups*. Unpublished doctoral dissertation, University of Jena.
- Giessner, S.R., & Mummendey, A. (in press). United we win, divided we fail? Effects

- of cognitive representations and performance feedbacks on merging groups. *European Journal of Social Psychology*.
- Giessner, S. R., Viki, G. T., Otten, S., Terry, D. J., & Taeuber, S. (2006). The challenge of merging: Merger patterns, premerger status, and merger support. *Personality and Social Psychology Bulletin*, 32, 339-352.
- Goedegebuure, L. (1992). *Mergers in higher education. A comparative perspective*. Utrecht: Lemma.
- González, R., & Brown, R. (2003). Generalization of positive attitude as a function of subgroup and superordinate group identifications in intergroup contact. *European Journal of Social Psychology*, 33, 195-214.
- Greenberg, J. (1987). Reactions to procedural injustice in payment distributions: Do the means justify the ends? *Journal of Applied Psychology*, 72, 55-71.
- Greitemeyer, T., Fischer, P., Nürnberg, C., Frey, D., & Stahlberg, D. (2006). Psychologische Erfolgsfaktoren bei Unternehmens-zusammenschlüssen. Der Zusammenhang von aktueller Übernahme-position, Identifikation mit der Organisation, erlebter Kontrolle und subjektivem Wohlbefinden der Mitarbeiter/innen.[Psychological factors of organizational mergers: The relationship between premerger status, identification with the organization, perceived control, and subjective well-being.] *Zeitschrift für Arbeits- und Organisationspsychologie*, 50, 9-16.
- Harman, G., & Harman, K. (2003). Institutional mergers in higher education: Lessons from international experience. *Tertiary Education and Management*, 9, 29-44.
- Harman, K. (2002). Merging divergent campus cultures into coherent educational communities: Challenges for higher education leaders. *Higher Education*, 44, 91-114.
- Harman, K., & Meek, V. L. (2002). Introduction to special issue: Merger revisited:

- international perspectives on mergers in higher education. *Higher Education*, 44, 1-4.
- Harth, N. S., Kessler, T., & Leach, C. W. (2007). *Advantage doesn't always feel the same: exploring group-based pride, guilt, and sympathy*. Manuscript submitted for publication.
- Haslam, S. A. (2001). *Psychology in Organizations. The social identity approach*. London: Sage Publication.
- Haslam, S. A., Eggins, R., & Reynolds, K. (2003). The ASPIRe model: Actualizing Social and Personal Identity Resources to enhance organizational outcomes. *Journal of Occupational and Organizational Psychology*, 76, 83-113.
- Haslam, S. A., Postmes, T., & Ellemers, N. (2003). More than a metaphor: Organizational identity makes organizational life possible. *British Journal of Management*, 14, 357- 369.
- Haslam, S., Powell, C., & Turner, J. (2000). Social identity, self-categorization, and work motivation: Rethinking the contribution of the group to positive and sustainable organisational outcomes. *Applied Psychology: An International Review*, 49, 319-339.
- Haslam, S. A., & Turner, J. C. (1992). Context-dependent variation in social stereotyping 2: The relationship between frame of reference, self-categorization and accentuation. *European Journal of Social Psychology*, 22, 251-277.
- Haslam, S. A., Turner, J. C., Oakes, P. J., & McGarty, C. (1992). Context-dependent variation in social stereotyping 1: The effects of intergroup relations as mediated by social change and frame of reference. *European Journal of Social Psychology*, 22, 3-20.
- Haslam, S. A., van Knippenberg, D., Platow, M. P., & Ellemers, N. (2003). *Social*

- identity at work. Developing theory for organizational practice.* New York, Hove: Psychology Press.
- Haunschild, P. R., Moreland, R. L., & Murrell, A. J. (1994). Sources of resistance to mergers between groups. *Journal of Applied Social Psychology*, 24, 1150-1178.
- Hener, Y. (2005). Fusionsprozess Neue Universität Lüneburg. Zwischenbilanz. [Merger processes of the new university Lüneburg. Interim results]. In G. Köhler & C. Kleinwächter (Eds.), *Bologna-Universitäten?* (pp. 104-117) Frankfurt am Main: Gewerkschaft Erziehung und Wissenschaft. Materialien und Dokumente Hochschule und Forschung.
- Henry, P., & Hardin, C. (2006). The contact hypothesis revisited: Status bias in the reduction of implicit prejudice in the United States and Lebanon. *Psychological Science*, 17, 862-868.
- Hewstone, M., & Brown, R. (1986). Contact is not enough: An intergroup perspective on the 'contact hypothesis'. *Contact and conflict in intergroup encounters* (pp. 1-44). Cambridge, (MA): Basil Blackwell.
- Hewstone, M., Rubin, M., & Willis, H. (2002). Intergroup bias. *Annual Review of Psychology*, 53, 575-604.
- Hinkle, S., & Brown, R. (1990). Intergroup comparisons and social identity: Some links and lacunae. In D. Abrams & M. A. Hogg (Eds.), *Social identity theory: Constructive and critical advances.* New York, Harvester/Wheatsheaf.
- Hogan, E.A., & Overmyer-Day, L. (1994). The psychology of mergers and acquisitions. In C.L. Cooper, & L.T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology*, 9, (pp 249-279). Oxford: Basil Blackwell.
- Hogg, M. A., & Abrams, D. (1988). *Social identifications: A social psychology of intergroup relations and group processes.* Taylor & Frances/Routledge.

- Hogg, M. A., & Reid, S. (2001). Social identity, leadership, and power. In A. Lee-Chai, & J. A. Bargh (Eds.), *The use and abuse of power: Multiple perspectives on the causes of corruption* (pp. 159-180). Psychology Press.
- Hogg, M. A., & Terry, D. J. (2000). Social identity and self-categorization processes in organizational contexts. *Academy of Management Review*, 25, 121-140.
- Hogg, M. A., & Terry, D. J. (2001). *Social identity processes in organizational contexts*. Philadelphia: Psychology Press.
- Hong, Y.-Y., Liao, H.-Y., Chan, G., Wong, R.Y. M., Chiu, C.-Y., et al. (2006). Temporal causal links between outgroup attitudes and social categorization: The case of Hong Kong 1997 transition. *Group Processes and Intergroup Relations*, 9, 265-288.
- Hornsey, M. J., & Hogg, M. A. (2000). Subgroup relations: A comparison of mutual intergroup differentiation and common ingroup identity models of prejudice reduction. *Personality and Social Psychology Bulletin*, 26, 242-256.
- Hornsey, M., & Hogg, M. A. (2002). The effects of status on subgroup relations. *British Journal of Social Psychology*, 41, 203-218.
- Hornsey, M. J., van Leeuwen, E., & van Santen, W. (2003). Dragging down and dragging up: How relative group status affects responses to common fate. *Group Dynamics*, 7, 275-288.
- Hox, J. J. (2002). *Multilevel analysis. Techniques and application*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hox, J. J., & Stoel, R. D. (2005). Multilevel and SEM approaches to growth curve modelling. In B.S. Everitt & D. C. Howell (Eds.), *Encyclopedia in Statistics in Behavioral Science* (pp. 1296-1305). Chichester: John Wiley & Sons.
- Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure

- analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Islam, M., & Hewstone, M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived out-group variability, and out-group attitude: An integrative model. *Personality and Social Psychology Bulletin*, 19, 700-710.
- Ivancevich, J. M., Schweiger, D. M., & Power, F. R. (1987). Strategies for managing human resources during mergers and acquisitions. *Human Resource Planning*, 10, 19-35.
- Jackson, J. W. (1993). Realistic group conflict theory: A review and evaluation of the theoretical and empirical literature. *Psychological Record*, 43, 395-413.
- Jackson, J. W. (2002). Intergroup attitudes as a function of different dimensions of group identification and perceived intergroup conflict. *Self and Identity*, 1, 11-33.
- Jetten, J., O'Brien, A., & Trindall, N. (2002). Changing identity: Predicting adjustment to organizational restructure as a function of subgroup and superordinate identification. *British Journal of Social Psychology*, 41, 281-298.
- Jetten, J., Spears, R., & Manstead, A. (1997a). Distinctiveness threat and prototypicality: Combined effects on intergroup discrimination and collective self-esteem. *European Journal of Social Psychology*, 27, 635-657.
- Jetten, J., Spears, R., & Manstead, A. (1997b). Strength of identification and intergroup differentiation: The influence of group norms. *European Journal of Social Psychology*, 27, 603-609.
- Jetten, J., Spears, R., & Postmes, T. (2004). Intergroup distinctiveness and differentiation: A meta-analytic integration. *Journal of Personality and Social Psychology*, 86, 862-879.

- Johnson, W., McGue, M., & Iacono, W. (2006). Genetic and environmental influences on academic achievement trajectories during adolescence. *Developmental Psychology*, 42, 514-532.
- Kashima, E., Kashima, Y., & Hardie, E. (2000). Self-typicality and group identification. Evidence for their separateness. *Group Processes and Intergroup Relations*, 3, 97-110.
- Kavanagh, M. H. ,& Ashkanasy, N. M. (2006). The impact of leadership and change management strategy on organizational culture and individual acceptance of change during a merger. *British Journal of Management*, 17, 81-103.
- Kenny, D. (1975). Cross-lagged panel correlation: A test for spuriousness. *Psychological Bulletin*, 82, 887-903.
- Kessler, T., & Mummendey, A. (2001). Is there any scapegoat around? Determinants of intergroup conflicts at different categorization levels. *Journal of Personality and Social Psychology*, 81, 1090-1102.
- Kessler, T., & Mummendey, A. (2002). Sequential or parallel processes? A longitudinal field study concerning determinants of identity-management strategies. *Journal of Personality and Social Psychology*, 82, 75-88.
- Kiefer, T. (2002). Understanding the emotional experience of organizational change: Evidence from a merger. *Advances in Developing Human Resources*, 4, 39-61.
- Kiefer, T. (2005). Feeling bad: antecedences and consequences of negative emotions in ongoing change. *Journal of Organizational Behavior*, 26, 875-897
- Klendaue, R., Frey, D., & Greitemeyer, T. (2006). Ein psychologisches Rahmenkonzept zur Analyse von Fusions- und Akquisitionsprozessen. [A psychological framework for the analysis of merger & acquisition processes], *Psychologische Rundschau*, 57, 87-96.

- Kline, R. B. (2005). *Structural equation modeling* (2nd ed.). New York, NY: The Guilford Press.
- Kramer, M. W., Dougherty, D. S., & Pierce, T. A. (2004). Managing uncertainty during a corporate acquisition: A longitudinal study of communication during an airline acquisition. *Human Communication Research*, 30, 71-101.
- Lang, D. W. (2002). There are mergers, and there are mergers: The form of inter-institutional combination. *Higher Education Management and Policy*, 14, 11-51.
- Levine, M. (2003). Times, theories and practices in social psychology. *Theory and Psychology*, 13, 53 - 72.
- Lipponen, J., Helkama, K., & Juslin, M. (2003). Subgroup identification, superordinate identification, and intergroup bias between the subgroups. *Group Processes and Intergroup Relations*, 6, 239-250.
- Lipponen, J., Olkkonen, M.-E., & Moilanen, M. (2004). Perceived procedural justice and employees responses to an organizational merger. *European Journal of Work and Organizational Psychology*, 13, 391-413.
- Lorenzi-Cioldi, F., & Doise, W. (1990). Levels of analysis and social identity. In D. Abrams & M. A. Hogg (Eds.), *Social identity theory. Constructive and critical advances*. (pp. 71-89). New York: Harvester-Wheatsheaf.
- Lucks, K., & Meckl, E. (2002). *Internationale Merger & Acquisitionen. Der prozessorientierte Ansatz* [International mergers & acquisitions. A process oriented approach]. Berlin: Springer.
- Mael, F., & Ashforth, B.E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13, 103-123.
- Marks, M. L., & Mirvis, P. M. (1986). The merger syndrome. *Psychology Today*, 20,

36–42.

- Marks, M. L., & Mirvis, P. M. (1992). Rebuilding after the merger: Dealing with survivor sickness. *Organizational Dynamics*, 21, 18.
- Marks, M. L., & Mirvis, P. M. (2001). Making mergers and acquisitions work: Strategic and psychological preparation. *Academy of Management Executive*, 15, 80-94.
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41, 954-969.
- Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology*, 38, 299-337.
- McGrath, J. E., Arrow, H., & Berdahl, J. L. (2000). The study of groups: Past, present, and future. *Personality and Social Psychology Review*, 4, 95-105.
- McGrath, J. E., & Tschau, F. (2004). *Temporal matters in social psychology. Examining the role of time in the lives of groups and individuals*. Washington, D.C.: American Psychological Association.
- McKinsey, J. O. (1929). Effect of mergers on marketing, production, and administrative problems. *The Journal of Business of the University of Chicago*, 2, 326-337.
- Melewar, T., & Harrold, J. (2000). The role of corporate identity in mergers and acquisition activity. *Journal of General Management*, 26, 17-31.
- Merriam Webster Online Dictionary (2007). Merger. Retrieved March 30, 2007, from <http://www.merriamwebster.com/cgi-bin/dictionary?book=Dictionary&va=merg-er>
- Meyer, C. B. (2001). Allocation processes in mergers and acquisitions: An organizational justice perspective. *British Journal of Management*, 12, 47-66.
- Mills, M., Bettis, P., Miller, J. W., & Nolan, R. (2005). Experience of academic unit

- reorganization: Organizational identity and identification with organizational change. *The Review of Higher Education*, 28, 597-619.
- Millward, L. J., & Kyriakidou, O. (2004). Linking pre- and post-merger identities through the concept of career. *Career Development International*, 9, 12-27.
- Mitchell, T.R., & James, L. R. (2001). Building better theory: Time and the specification of when things happen. *Academy of Management Review*, 26, 530-547.
- Mlicki, P., & Ellemers, N. (1996). Being different or being better? National stereotypes and identifications of Polish and Dutch students. *European Journal of Social Psychology*, 26, 97-114.
- Mottola, G. R., Bachman, B. A., Gaertner, S. L., & Dovidio, J. F. (1997). How groups merge: The effects of merger integration patterns on anticipated commitment to the merged organization. *Journal of Applied Social Psychology*, 27, 1335-1358.
- Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology*, 22, 103-122.
- Mummendey, A., Klink, A., Mielke, R., Wenzel, M., & Blanz, M. (1999). Socio-structural characteristics of intergroup relations and identity management strategies: Results from a field study in East Germany. *European Journal of Social Psychology*, 29, 259-285.
- Mummendey, A., & Wenzel, M. (1999). Social discrimination and tolerance in intergroup relations: Reactions to intergroup difference. *Personality and Social Psychology Review*, 3, 158 -174.
- Nesselroade, J. R., & Baltes, P. B (1979). *Longitudinal research in the study of behavior and development*. New York: Academic Press.

- Nezlek, J. B. (2001). Multilevel random coefficient analyses of event- and interval-contingent data in social and personality psychology research. *Personality and Social Psychology Bulletin*, 27, 771-785.
- Ouwerkerk, J. W., Ellemers, N., & de Gilder, D. (1999). Group commitment and individual effort in experimental and organizational contexts. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity: Context, commitment, content*. (pp. 184-204). Oxford: Blackwell Science.
- Pan, B. A., Rowe, M. L., Singer, J. D., & Snow, C. E. (2005). Maternal correlates of growth in toddlers vocabulary production in low-income families. *Child Development*, 76, 763-782.
- Patterson, G. (2000). Findings on economies of scale in higher education: Implications for strategies of mergers and alliances. *Tertiary Education and Management*, 6, 259-269.
- Pettigrew, A.M. (1979). On studying organizational cultures. *Academy of Management Review*, 24, 570-581.
- Pettigrew, T. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49, 65-85.
- Pettigrew, T., & Tropp, L. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90, 751-783.
- Platow, M. J., Wenzel, M., & Nolan, M. (2003). The importance of social identity and self-categorization processes for creating and responding to fairness. In S.A. Haslam, D. van Knippenberg, M. J. Platow, & N. Ellemers (Eds.), *Social identity at work: Developing theory for organisational practice*. (pp. 261-276). New York: Psychology Press.
- Plewis, I. (2001). Explanatory models for relating growth processes. *Multivariate Behavioral Research*, 36, 207-225.

- Pratt, M.G. (1998). To be or not to be? Central questions in organizational identification. In D.A. Whetten & P.C. Godfrey (Eds.), *Identity in organizations: Building theory through conversations* (pp. 171-201). Thousand Oaks, CA: Sage.
- Pratt, M.G. (2001). Social identity dynamics in modern organizations: An organizational psychology/ organizational behavior perspective. In M. A. Hogg & D.J. Terry (Eds.), *Social identity processes in organizational contexts*. Philadelphia, PA: Psychology Press.
- Rabbie, J. M., Schot, J. C., & Visser, L. (1989). Social identity theory: A conceptual and empirical critique from the perspective of a behavioural interaction model. *European Journal of Social Psychology*, 19, 171-202.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods*. Thousand Oaks: Sage.
- Raudenbush, S. W., Bryk, A. S., & Congdon, R. (2004). Hierarchical linear and nonlinear modeling (Version 6) [Computer software]. Lincolnwood, IL: Scientific Software International.
- Reicher, S. (2004). The context of social identity: Domination, resistance, and change. *Political Psychology*, 25, 921-945.
- Reid, S. A., & Hogg, M. A. (2005). Uncertainty reduction, self-enhancement, and ingroup identification. *Personality and Social Psychology Bulletin*, 31, 804-817.
- Rogosa, D. (1980). A critique of cross-lagged correlation. *Psychological Bulletin*, 88, 245-258.
- Rosch, E. (1978). Principles of categorization. In E. Rosch & B. B. Lloyd (Eds.), *Cognition and categorization* (pp. 27-48). Hillsdale, NJ: Erlbaum.
- Rousseau, D. M. (1998). Why workers still identify with organizations. *Journal of*

Organizational Behavior, 19, 217-233.

Scheepers, D. (2002). *The social function of in-group bias*. Kurt Lewin Instituut, University of Leiden.

Scheepers, D., & Ellemers, N. (2005). When the pressure is up: The assessment of social identity threat in low and high status groups. *Journal of Experimental Social Psychology*, 41, 192-200.

Scheepers, D., Spears, R., Doosje, B., & Manstead, A. (2006). Diversity in in-group bias: Structural factors, situational features, and social functions. *Journal of Personality and Social Psychology*, 90, 944-960.

Schnabel, K. (1998). *HLM-Workshop*. Unpublished manuscript.

Schweiger, D. M., & DeNisi, A. (1991). Communication with employees following a merger: A longitudinal field experiment. *Academy of Management Journal*, 34, 110-135.

Seo, M. G., & Hill, N. S. (2005). Understanding the human side of merger and acquisition: An integrative framework. *Journal of Applied Behavioral Science*, 41, 422-443.

Sherif, M. (1966a). *Group conflict and co-operation: Their social psychology*. London: Routledge & Kegan Paul.

Sherif, M. (1966b). *In common predicament: Social psychology of intergroup conflict and cooperation*. Boston, MA: Houghton.Mifflin.

Sherif, M., & Sherif, C. W. (1953). *Groups in harmony and tension; an integration of studies of intergroup relations*. Harper & Brothers.

Sherif, M., & Sherif, C. W. (1969). *Social psychology*. New York: Harper & Row.

-
- Singer, J. D., & Willet, J. B. (2003). *Applied longitudinal data analysis. Modeling change and event occurrence*. Oxford: Oxford University Press.
- Skodvin, O. J. (1999). Mergers in higher education - success or failure? *Tertiary Education and Management*, 5, 65-80.
- Smith, E. (1996). What do connectionism and social psychology offer each other? *Journal of Personality and Social Psychology*, 70, 893-912.
- Snijders, T. (1996). Analysis of longitudinal data using the hierarchical linear model. *Quality and Quantity*, 30, 405-426.
- Spears, R., Doosje, B., & Ellemers, N. (1997). Self-stereotyping in the face of threats to group status and distinctiveness: The role of group identification. *Personality and Social Psychology Bulletin*, 23, 538-553.
- Spears, R., Jetten, J., & Scheepers, D. (2002). Distinctiveness and the definition of collective self: A tripartite model. *Self and motivation: Emerging psychological perspectives* (pp. 147-171). American Psychological Association.
- Stephan, W., & Stephan, C. (2000). An integrated threat theory of prejudice. *Reducing prejudice and discrimination* (pp. 23-45). Mahwah, NJ: Lawrence Erlbaum Associates Publishers
- Taeuber, S., Gleibs, I., & Viki, G.T. (2007, January). *What we get is what we want? Fit of perceived and desired merger pattern as a predictor for merger support*. Poster presented at the annual meeting of the Society of Personality and Social Psychology, Memphis, TN.
- Tajfel, H. (1969). Cognitive aspects of prejudice. *Journal of Social Issues*, 25, 79-97.
- Tajfel, H. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London: Academic Press.

- Tajfel, H. (1980). Experimental studies of intergroup behaviour. In M. Jeevew (Ed.), *Survey of psychology, No.3*. London: George Allen and Unwin.
- Tajfel, H. (1982). Instrumentality, identity and social comparison. In H. Tajfel (Ed.), *Social Identity and intergroup relations* (pp. 483-506). Cambridge: Cambridge University Press.
- Tajfel, H. & Turner, J.C. (1979). An integrative theory of intergroup conflict. In W.G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S.Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago: Nelson-Hall Publishing.
- Taris, T. (2000). *A primer to longitudinal data analysis*. London: Sage.
- Terry, D. J. (2001). Intergroup relations and organizational mergers. In M.A. Hogg & D. J. Terry (Eds.), *Social identity processes in organizational context* (pp. 229-249). Philadelphia: Psychology Press.
- Terry, D. J., & Callan, V. J. (1998). In-group bias in response to an organisational merger. *Group Dynamics*, 2, 67-81.
- Terry, D. J., Carey, C. J., & Callan, V. J. (2001). Employee adjustment to an organizational merger: An intergroup perspective. *Personality and Social Psychology Bulletin*, 27, 267-280.
- Terry, D. J., Callan, V. J., & Sartori, G. (1996). Employee adjustment to an organizational merger: Stress, coping and intergroup differences. *Stress Medicine*, 12, 105-122.
- Terry, D. J., & O'Brien, A. T. (2001). Status, legitimacy, and ingroup bias in the context

- of an organizational merger. *Group Processes and Intergroup Relations*, 4, 271-289.
- Tischendorf, K. (2007). *Problematische Intergruppen-Beziehungen nach Schulfusionen: Die Rolle relativer Eigengruppen-Prototypikalität in Abhängigkeit der Bewertung der fusionierten Gruppe*. [Problematic intergroup relations after a school merger: The role of ingroup prototypicality depending on the valence of the superordinate category]. Unpublished doctoral dissertation, University of Jena.
- Turner, J. C. (1982). Towards a cognitive redefinition of social groups. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 15-41). Cambridge: Cambridge University Press.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Blackwell.
- Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological Review*, 110, 403-421.
- Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin*, 63, 384-399.
- Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behaviour. *Personality and Social Psychology Review*, 7, 349-361.
- Tyler, T. R., & De Cremer, D. (2005). Process-based leadership: Fair procedure and reactions to organizational change. *Leadership Quarterly*, 16, 529-545.
- Ullrich, J., & van Dick, R. (in press). The group psychology of mergers & acquisitions: Lessons from the social identity approach. In C. L. Cooper & S. Finkelstein (Eds.), *Advances in Mergers and Acquisitions*.

- Ullrich, J., Christ, O., & Schlüter, E. (2006). Merging on mayday: Subgroup and superordinate identification as joint moderators of threat effects in the context of European Union's expansion. *European Journal of Social Psychology*, 36, 857-876.
- van Dick, R., Ullrich, J., & Tissington, P. A. (2006). Working under a black cloud: How to sustain organizational identification after a merger. *British Journal of Management*, 17, 69-79.
- van Dick, R., Wagner, U., & Lemmer, G. (2004). The winds of change. Multiple identifications in the case of organizational mergers. *European Journal of Work and Organizational Psychology*, 13, 121-138.
- van Knippenberg, D., van Knippenberg, B., Monden, L., & de Lima, F. (2002). Organizational identification after a merger: A social identity perspective. *British Journal of Social Psychology*, 41, 233-252.
- van Knippenberg, D., & van Leeuwen, E. (2001). Organizational identity after a merger: Sense of continuity as a key to postmerger identification. In M.A. Hogg & D. J. Terry (Eds.), *Social Identity Processes in Organizational Contexts* (pp. 249-265). New York and Hove: Psychology Press.
- van Knippenberg, D., & van Schie, E. C. M. (2000). Foci and correlates of organizational identification. *Journal of Occupational and Organizational Psychology*, 73, 137-147.
- van Leeuwen, E. (2001). *Preserving identity when group combine. A study of group-based reactions to mergers*. Kurt Lewin Instituut, University of Leiden.
- van Leeuwen, E., van Knippenberg, D., & Ellemers, N. (2003). Continuing and changing group identities: The effects of merging on social identification and ingroup bias. *Personality and Social Psychology Bulletin*, 29, 679-690.

- van Oudenhoven, J. P., & de Boer, T. (1995). Complementarity and similarity of partners in international mergers. *Basic and Applied Social Psychology*, 17, 343-356.
- Vignoles, V. L., Regalia, C., Manzi, C., Golledge, J., & Scabini, E. (2006). Beyond self-esteem: Influence of multiple motives on identity construction. *Journal of Personality and Social Psychology*, 90, 308-333.
- Vossen, I. (2006). *Crushing the glass ceiling: relative group prototypicality and female strategies in discriminating organizational settings*. Unpublished doctoral dissertation, University of Jena.
- Waldzus, S., Mummendey, A., Wenzel, M., & Weber, U. (2003). Towards tolerance: Representations of superordinate categories and perceived ingroup prototypicality. *Journal of Experimental Social Psychology*, 39, 31-47.
- Waldzus, S., Mummendey, A., Wenzel, M., & Boettcher, F. (2004). Of bikers, teachers and Germans: Groups' diverging views about their prototypicality. *British Journal of Social Psychology*, 43, 385-400.
- Waldzus, S., Mummendey, A., & Wenzel, M. (2005). When 'different' means 'worse': In-group prototypicality in changing intergroup contexts. *Journal of Experimental Social Psychology*, 41, 76-83.
- Weber, R., & Crocker, J. (1983). Cognitive processes in the revision of stereotypic beliefs. *Journal of Personality and Social Psychology*, 45, 961-977.
- Weber, U., Mummendey, A., & Waldzus, S. (2002). Perceived legitimacy of intergroup status differences: Its prediction by relative ingroup prototypicality. *European Journal of Social Psychology*, 32, 449-470.
- Wegge, J., & Haslam, A. (2003). Group goal setting, social identity and self-categorization: Engaging the collective self to enhance group performance and organisational outcomes. In A. Haslam, D. van Knippenberg, M. Platow & N.

- Ellemers (Eds.), *Social identity at work: Developing theory for organisational practice* (pp 74-99). London: Taylor and Francis.
- Weiß, A., Noack, P., & Mummendey, A. (2007). *The role of social identity processes and group-related justice perceptions for students' adjustment to a school merger: An intergroup perspective*. Unpublished manuscript.
- Wenzel, M., Mummendey, A., Weber, U., & Waldzus, S. (2003). The ingroup as pars pro toto: Projection from the ingroup onto the inclusive category as a precursor to social discrimination. *Personality and Social Psychology Bulletin*, 29(4), 461-473.
- West, S. G., Biesanz, J. C., & Kwok, O. M. (2004). Within-Subject and longitudinal experiments: Design and analysis issues. In C. Sansone, C. C. Morf, & A. T. Panter (Eds.), *The Sage handbook of methods in social psychology* (pp. 287-312). London: Sage Publications.
- Worchel, S. (1998). Establishing group identity: A developmental framework. In S. Worchel, F. J. Morales, D. Paez, & J.-C. Deschamps (Eds.), *Social identity: International perspectives* (pp. 53-74). London: Sage.
- Zaheer, S., Albert, S., & Zaheer, A. (1999). Time scales and organizational theory. *The Academy of Management Review*, 24, pp. 725-741.
- Zechlin, L. (2003). *Hochschulfusion als Management von Differenzen* [University mergers as a strategy to manage differences]. Retrieved October 10th 2006, from University of Essen-Duisburg Web site: <http://www.uni-duisburg.de/Verwaltung/Rektor/hochschulfusion-als-management-von-differenz.pdf>

Appendix

Verwendete Masse im Original

Identifikation

1. Ich sehe mich als Mitglied der [FH / Uni Lüneburg/ Neuen Universität Lüneburg].
2. Ich bin froh, StudentIn der [FH / Uni Lüneburg/ Neuen Universität Lüneburg] zu sein.
3. Ich fühle mich der [FH / Uni Lüneburg/ Neuen Universität Lüneburg] sehr verbunden.
4. Ich identifiziere mich mit anderen Studierenden der [FH / Uni Lüneburg/ Neuen Universität Lüneburg].

Eigengruppentypikalität

1. Die Studierenden der [FH / Uni Lüneburg] sind typisch für die Studierenden der Neuen Universität Lüneburg.

Wahrgenommene Fairness

1. Ich finde es fair, wie die Studierenden der [Eigengruppe] während des Fusionsprozesses abschneiden.
2. Ich finde es fair, wie die Studierenden der [Fremdgruppe] während des Fusionsprozesses abschneiden.
3. Die momentane Ausgangslage der Studierenden beider Gruppen ist gerechtfertigt.

Intergruppen Kontakt

1. Wie oft haben Sie an Ihrer jetzigen Hochschule Kontakt mit den Studierenden der [Fremdgruppe]?

2. Haben Sie unter den Studierenden der [Fremdgruppe] Freunde oder gute Bekannte?

Bewertung der Eigen- und Fremdgruppe

Sympathie

1. Die Studierenden der [FH / Uni Lüneburg] sind mir sehr sympathisch.
2. Ich kann die Studierenden der [FH / Uni Lüneburg] im Allgemeinen nicht leiden (rekodiert).
3. Ich mag die Studierenden der [FH / Uni Lüneburg].

Kontakt

4. Ich finde es wichtig, Kontakt mit Studierenden der [FH / Uni Lüneburg] zu haben.
5. Mit Studierenden der [FH / Uni Lüneburg] muss ich nicht unbedingt viel zu tun haben (rekodiert).
6. Ich würde gerne mehr Studierende der [FH / Uni Lüneburg] kennenlernen.

Verhaltensintention

7. Wenn jemanden etwas gegen die Ausbildung der Studierenden der [FH / Uni Lüneburg] sagt, verteidige ich diese normalerweise.
8. Wenn ich auf einer Party mit Studierenden der [FH / Uni Lüneburg] treffe, gehe ich ihnen meistens aus dem Weg (rekodiert).
9. In Zukunft würde ich in Seminaren gerne mit Studierenden der [FH / Uni Lüneburg] zusammenarbeiten.

Verhaltensintention gegenüber Eigen- und Fremdgruppe

Stellen Sie sich vor, dass Sie konkreten Einfluss auf die Geldvergabe der Neuen Universität Lüneburg hätten. Es geht um die Entscheidung, wie Sie Gelder zwischen den Studierenden der ehemaligen FH und der Uni Lüneburg aufteilen würden.

Angenommen, Sie haben einen Geldbetrag von 100 Einheiten (entspricht 100 000 Euro) zur Verfügung. Ihnen alleine obliegt die Entscheidung, wie das Geld aufgeteilt wird. Wie entscheiden Sie sich?

_____ Betrag FH

_____ Betrag Uni

Positive Einstellung gegenüber der Fusion

1. Meine Bereitschaft zur Hochschulfusion ist groß.
2. Die Integration der Hochschulen wird meiner Meinung nach zu einem Erfolg führen.
3. Ich freue mich auf die Hochschulfusion.
4. Als Studierende/r der Neuen Universität Lüneburg engagiere ich mich für eine erfolgreiche Fusion.
5. Als Studierende/r der Neuen Universität Lüneburg empfinde ich die Fusion als eine positive Entwicklung.

Summary

The objective of the present thesis was to investigate organisational members' reactions to change as result of a merger. How do people react when their own group's content and composition changes? How does that affect the extent to which they define themselves as members of the (new) group, and think as well as act in terms of that group membership? The goal was to understand how constructs from intergroup research contribute to explain resistance and support in a merger. Thereby, special emphasis was put on change and the dynamic nature of social psychological processes. I applied a longitudinal design to examine an ongoing higher education merger that involved a university and a polytechnic. This study focused on an intergroup perspective in mergers referring to a remark by James McKinsey (1929) who noted that an *esprit de corps* is important for merger success and that mergers are often accompanied by jealousy and rivalry between the involved organisations. The scope of the study was to extend previous intergroup research on mergers (e.g., Haslam, 2001; Terry, 2001) by understanding changing identification processes and intergroup relations as two aspects that play a key role in merger adjustment. More specifically, this was done by conducting a three-wave questionnaire study whereby theoretical approaches such as SIA and IPM were applied to a field setting, thus, strengthening their external validity but also disclosing their limits.

The overall research question - how adjustment to and a positive stance on a merger develop - was converged from two directions. Therefore, in the first empirical chapter (chapter 4) two further research questions were posed: *What are the patterns of change in post-merger identification* and are there possible differences due to membership in the dominant or subordinate organisation? *Is post-merger identification related to pre-merger identification, ingroup typicality, and perceived fairness* as suggested by previous research (i.e., Amiot et al, 2006; van Knippenberg et al., 2002). In the second empirical chapter (chapter 5), I focused on intergroup relations and organisational members' response to a merger in terms of ingroup bias, and whether this influences their attitude towards the merger. Here, the overall research issue was expanded into two further questions, namely: *What are determinants of intergroup conflict and which role plays intergroup conflict in predicting positive attitudes towards the merger*. I presented empirical results from cross-lagged regression of ingroup bias

on pre-and post-merger identification and intergroup contact as well as a positive stance on the merger.

Data were collected over three points of measurement (April 2005, October 2005, and April 2006) from altogether 466 economics students from a university and a polytechnic college that officially merged in January 2005. In total, 157 students completed all three questionnaires, a response rate of 33%, respectively. Those who completed the questionnaire at Time 1, Time 2, and Time 3 were aged between 20 and 34 years ($M = 24.5$, $SD = 2.4$). 50.6% of the participants were female and 49.4% male. The sample consisted of 78 students from the former university and 79 students from the former polytechnic.

For the *first* part of the thesis, I examined patterns of change in post-merger identification. A multilevel model of change (Singer & Willet, 2003) yielded that change in post-merger identification could be described as quadratic, hence decreased from Time 1 to Time 2 but increased from Time 2 to Time 3. This development was parallel for members of the dominant and subordinate organisations. Generally, post-merger identification was low, indicating that adjustment, marked by post-merger identification, is difficult to achieve. Furthermore, I analysed time-varying effects of pre-merger identification, ingroup typicality, and perceived fairness on post-merger identification. It was shown that the effects of pre-merger identification dissipated over time, whereas the effect of perceived fairness became more pronounced. Additionally, the relationship between ingroup typicality and post-merger identification remained unchanged over time. The effects of pre-merger identification and ingroup typicality on post-merger identification were different for members of the dominant and subordinate organisations. To summarise, post-merger identification as well as the prediction by pre-merger identification and perceived fairness were influenced by time and organisational membership. These results point to the fact that predictive power of variables change over time, hence that relationships between constructs are time-varying. Therefore, it seems inappropriate to apply a holochronic perspective, hence a perspective independently of time-scales, when examining social psychological phenomenon.

For the *second* part of the thesis, I focus on intergroup relations and organisational members' response to a merger in terms of ingroup bias, and whether this influences their attitude towards the merger. The main point was to investigate change and stability, and directional relations between constructs. In a second part, I presented

empirical results for cross-lagged effects of ingroup bias. Because critical measures were only assessed at Time 2 and Time 3, I conducted analysis only for the Time 2 and Time 3 sample (N=211; 119 students from the former university and 92 students from the former polytechnic). Cross-lagged panel analysis indicated that pre-merger identification and contact at Time 2 influenced changes in judgemental bias at Time 3, and that bias also influenced pre-merger identification in a bidirectional manner. Surprisingly, neither post-merger identification nor a dual identification (high pre- and post-merger identification) had any substantial effect on bias over time. High pre-merger identification and low post-merger identification led to the highest amount of judgemental ingroup bias when analysed cross-sectionally. Importantly, I found a reciprocal relationship between bias and attitude towards the merger, indicating that the stronger the bias, the less favourable the attitude, and vice versa. From a theoretical point of view, the fact that judgemental and behavioural bias revealed different relations with the predictor and outcome variables is interesting. This alludes that bias might have differential functions and motives in a changing context (Scheepers, Spears, Doosje, & Manstead, 2006).

The overall research question stated in the present study was *how adjustment to and a positive stance on a merger develop*. Results from this longitudinal study revealed that adjustment in terms of increased post-merger identification is difficult to achieve. However, particularly the perception of a fair process and outcome becomes important when predicting post-merger identification. Moreover, it was shown that ingroup bias is apparent in this “real merger” for both involved merger partners and that it is related to pre-merger identification and contact. Pre-merger identification fosters bias, whereas positive intergroup contact reduces bias. Ingroup bias is related to a positive stance over the merger and, therefore, directly influences and is influenced by organisational members’ attitudes towards the merger.

In conclusion, group-based phenomena such as group identification, intergroup contact and perceived justice are useful and important for understanding resistance or support throughout a merger. The effects of these variables, however, also depend on the specific merger characteristics and the time-scale. Still, James McKinsey (1929) proofed correct when he stated that one important problem is the development of a proper “esprit de corps” and that mergers are often characterised by rivalry. Further theoretical and practical implications were discussed in the present thesis.

Zusammenfassung

In der vorliegenden Arbeit ging es darum, die Reaktion organisationaler Mitglieder in Bezug auf eine Fusion zu untersuchen. Wie reagieren Menschen, wenn ihre eigene Gruppe sich durch eine Fusion in Zusammensetzung und Inhalt verändert? Welchen Effekt hat diese Veränderung darauf, wie sich Menschen als Gruppenmitglied identifizieren, wenn sie im Sinne ihrer Gruppenidentität handeln? Das übergeordnete Ziel dieser Studie war es, zu verstehen, wie Konstrukte aus der Intergruppenforschung dazu beitragen können, Widerstand und Unterstützung während einer Fusion zu erklären. Außerdem wurde besonderes Augenmerk auf die Veränderung und die dynamische Struktur sozialpsychologischer Prozesse gelegt. Der spezielle Verweis auf die Intergruppenperspektive begründet sich auch durch ein Zitat von James McKinsey (1929), der festgestellt hat, dass ein *esprit de corps* wichtig ist für eine erfolgreiche Fusion, dass aber Fusionen häufig von Eifersüchteleien und Rivalität zwischen den alten Organisationen geprägt sind. Der Rahmen dieser Arbeit war es, bisherige Intergruppenforschung zu Fusionen (Haslam, 2001; Terry, 2001) zu erweitern, in dem ich die Entwicklung von Identifikationsprozessen und Intergruppenbeziehungen, zwei Aspekte, die mit Anpassung an eine Fusion verknüpft sind, untersucht habe. Dazu wurde eine Längsschnittsstudie durchgeführt. Annahmen des Ansatzes der Sozialen Identität (Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) und des Eigenprojektionsmodells (Mummendey & Wenzel, 1999) wurden auf eine Feldsituation angewendet, was einerseits die externe Validität erhöht und andererseits die Grenzen der Ansätze aufzeigt.

Das übergeordnete Forschungsinteresse- wie sich die Anpassung an und eine positive Einstellung zur Fusion entwickelt- wurde von zwei Seiten betrachtet. Dabei wurden im ersten empirischen Kapitel (Kapitel 4) zwei Forschungsfragen gestellt: 1.) Wie verändert sich die Postfusionsidentifikation, gibt es dabei Unterschiede zwischen Mitgliedern der beiden Organisationen. 2.) Ist die Postfusionsidentifikation verbunden mit der Präfusionsidentifikation, Eigengruppentypikalität, und wahrgenommener Fairness, wie von vorherigen Forscherinnen angenommen (Amiot et al., 2006; van Knippenberg et al., 2002). Im zweiten empirischen Kapitel (Kapitel 5), liegt der Fokus auf den Intergruppenbeziehungen. Untersucht wurde, wie organisationale Mitglieder auf die Fusion z.B. in Bezug auf Eigengruppenverzerrung reagieren und wie sich dieses auf ihre Einstellung zur Fusion insgesamt auswirkt. Auch hier wurde das übergeordnete

Forschungsziel in zwei Fragen übertragen: Was sind Determinanten von Intergruppenkonflikt und welche Rolle spielt der Intergruppenkonflikt bei der Vorhersage von einer positiven Einstellung zur Fusion? Diese Fragen wurden mit Hilfe von cross-lagged Panelregression von Prä- und Postfusionsidentifikation und Intergruppenkontakt auf Eigengruppenverzerrung, sowie von Eigengruppenverzerrung auf eine positive Einstellung zur Fusion untersucht.

Daten wurden an drei Messzeitpunkten (April, 2005, Oktober, 2005 und April 2006) von insgesamt 466 Ökonomikstudierenden einer Universität und einer Fachhochschule, die offiziell am 1. Januar 2005 fusioniert wurden, erhoben. Von diesen Studierenden füllten 157 alle drei Fragebögen aus, was einer Rücklaufquote von 33% entspricht. Diejenigen, die den Fragebogen zu Zeitpunkt (T) 1, 2 und 3 beantwortet hatten, waren zwischen 20 und 34 Jahren alt ($M = 24.5$, $SD = 2.4$). 50.6% der Befragten waren weiblich und 49.4% männlich. Das Sample setzte sich aus 78 Studierenden der Universität und 79 Studierenden der Fachhochschule zusammen.

Im ersten Teil der Arbeit wurde also zwei Fragen nachgegangen: Nach welchem Muster entwickelt sich die Postfusionsidentifikation und gibt es dabei Unterschiede zwischen Studierenden der dominanten (Uni) und dominierten (FH) Organisation? Ist die Postfusionsidentifikation auch über die Zeit mit der Präfusionsidentifikation, Eigengruppentypikalität und wahrgenommener Fairness verknüpft. Als erstes wurde das Veränderungsmuster von Postfusionsidentifikation untersucht.

Ein Mehrebenenveränderungsmodell (Singer & Willet, 2003) zeigte, dass die Veränderung von Postfusionsidentifikation quadratisch verläuft, d.h. sie sinkt zwischen T1 und T2 ab, und steigt dann langsam von T2 zu T3. Diese Veränderung ist identisch für Studierende der dominanten und dominierten Organisation. Generell war die Postfusionsidentifikation eher gering, was darauf hindeutet, dass eine Anpassung an die Fusion, beschrieben als Postfusionsidentifikation, schwierig zu erlangen ist. In weiteren Analyseschritten wurden die zeitvarianten Effekte der Prädiktoren Präfusionsidentifikation, Eigengruppentypikalität und wahrgenommene Fairness untersucht. Dabei zeigte sich, dass der Effekt von Präfusionsidentifikation auf Postfusionsidentifikation über die Zeit verschwindet. Der Effekt von wahrgenommener Fairness auf Postfusionsidentifikation wurde hingegen stärker. Der prädiktive Effekt von Eigengruppentypikalität blieb unverändert über die Zeit. Zusätzlich moderierte die organisationale Mitgliedschaft die Effekte von Präfusionsidentifikation (Präfusionsidentifikation hat nur für die Studierenden der dominanten Organisation

einen signifikanten Effekt zu T1) und Eigengruppentypikalität (eine positive Beziehung für Studierende der dominierten und eine negative Beziehung für Studierende der dominanten Organisation). Zusammenfassend kann man sagen, dass Postfusionsidentifikation sowie dessen Prädiktoren vom Zeitpunkt im Fusionsprozess und z.T. der organisationalen Zugehörigkeit beeinflusst wird. Das lässt daraufhin deuten, dass sowohl das Kriterium, aber insbesondere auch die Vorhersagestärke von Variablen über die Zeit variieren, sie Beziehungen zwischen Variablen also zeitvariant sind. Daher scheint es unangebracht, eine holochronische Perspektive (Zaheer, Albert, & Zaheer, 1999), d.h. von Effekten, die über die Zeit andauern, auszugehen, wenn man sozialpsychologische Phänomene betrachtet.

Im zweiten Teil der vorliegenden Dissertation lag der Fokus auf den Intergruppenbeziehungen und den Reaktionen organisationaler Mitglieder aufgrund der Fusion in Bezug auf Eigengruppenverzerrung. Außerdem wurde untersucht inwieweit Eigengruppenverzerrung die Einstellung gegenüber der Fusion beeinflusst. Der Hauptpunkt lag hier auf der Überprüfung von Stabilität und Veränderung und den gerichteten Beziehungen zwischen Konstrukten. Daher berichtete ich im zweiten Teil der Arbeit cross-lagged panel Effekte von und auf Eigengruppenverzerrung. Da einige zentrale Maße nur zu Messzeitpunkt 2 und 3 erhoben wurden, wurden die Analysen nur für diese beiden Zeitpunkte durchgeführt. Die Datengrundlage bildeten die Antworten von 211 Studierende (119 von der Uni, und 92 von der FH). Cross-lagged Analysen haben dabei gezeigt, dass Präfusionsidentifikation und Kontakt zu T2 einen signifikanten Einfluss auf Eigengruppenverzerrung zur T3 haben, und dass Eigengruppenverzerrung zu T2 wiederum Präfusionsidentifikation zu T3 beeinflusst, dass also ein bidirektionaler Zusammenhang besteht. Überraschenderweise hatte weder Postfusionsidentifikation noch eine Doppelidentifikation (hohe Prä- und Postfusionsidentifikation) einen Effekt auf Eigengruppenverzerrung über die Zeit. Querschnittlich hingegen führten eine hohe Präfusionsidentifikation und eine niedrige Postidentifikation zu mehr Eigengruppenverzerrung. Ein wichtiges Ergebnis ergab sich für den Zusammenhang zwischen Eigengruppenverzerrung und einer positiven Einstellung gegenüber der Fusion. Auch hier bestand ein reziproker Zusammenhang, der nahe legt, dass eine positive Einstellung umso geringer ist, je höher Eigengruppenverzerrung ist, und außerdem Eigengruppenverzerrung reduziert wird, je positiver die Einstellung gegenüber der Fusion ist. Theoretisch ist außerdem von Bedeutung, dass sich zwei Eigengruppenverzerrungsmaße, nämlich ein evaluatives und

ein eher verhaltensnahes Maß, unterschiedliche Beziehung zu den Prädiktoren und dem Kriterium der positiven Einstellung aufweisen. Dies weist daraufhin, dass Eigengruppenverzerrung in einem veränderbaren Kontext unterschiedliche Funktionen und Motivationen haben kann (Scheepers, Spears, Doosje, & Manstead, 2006).

Das übergeordnete Forschungsanliegen war, wie sich Anpassung und eine positive Einstellung gegenüber der Fusion über die Zeit verändern. Meine Ergebnisse deuten daraufhin, dass eine Anpassung an die Fusion, angezeigt z.B. über eine hohe Postfusionsidentifikation, relative schwierig zu erreichen ist. Dennoch ist besonders die wahrgenommene Fairness, in Bezug auf den Fusionsprozess und das Resultat, wichtig für die Vorhersage von Postfusionsidentifikation. Ferner zeigten die meisten Befragten in dieser „realen“ Fusion Eigengruppenverzerrung, als Indikator für Intergruppenrivalität, der mit Präfusionsidentifikation und Intergruppenkontakt verbunden war. Präfusionsidentifikation fördert und Kontakt reduziert die Eigengruppenverzerrung. Außerdem ist Eigengruppenverzerrung direkt mit einer positiven Einstellung verknüpft, in dem Sinne, dass die Eigengruppenverzerrung eine positive Einstellung vorhersagt und durch diese vorhergesagt wird.

Abschließend kann gesagt werden, dass gruppenbasierte Indikatoren wie Gruppenidentifikation, Intergruppenkontakt und wahrgenommene Fairness brauchbar und wichtig sind, um Widerstand und Unterstützung während einer Fusion zu verstehen. Die Effekte dieser Variablen werden jedoch von den spezifischen Fusionscharakteristiken und dem Zeitverlauf einer Fusion beeinflusst. Dennoch lässt sich zusammenfassen, dass James McKinsey Recht hatte, als er sagte, dass die Entwicklung eines *esprit de corps* ein Problem bei einer Fusion darstellt und dass eine Fusion von Rivalität gekennzeichnet ist. In der vorliegenden Arbeit wurden weitere theoretische und praktische Implikationen diskutiert.

Curriculum Vitae

Name: Ilka Helene Gleibs

Geburtsdatum: 14.03.1978

Geburtsort: Aurich, Ostfriesland

Familienstand: ledig

Schullaufbahn:

1984 –1988 Grundschule Egels

1988 –1992 Orientierungsstufe „Waldschule Egels“

1992- 1997 Gymnasium Ulricianum, Aurich

1997 Abitur

Hochschulstudium:

1997 - 1998 Carl-von-Ossietzky Universität Oldenburg, Magisterstudium
Germanistik, Anglistik und Philosophie

1998 – 2004 Freie Universität Berlin, Diplomstudiengang Psychologie

2000 – 2001 Roskilde Universitetszentrum, Psychologie (Erasmusstipendium)

April 2004 Diplom in Psychologie

Ab Juni 2004 Promotions-Stipendiatin des Internationalen Graduierten-
Kollegs „Konflikt und Kooperation zwischen sozialen
Gruppen“

Ehrenwörtliche Erklärung

Hiermit erkläre ich, dass mir die geltende Promotionsordnung der Fakultät für Sozial- und Verhaltenswissenschaften der Friedrich-Schiller-Universität Jena bekannt ist.

Ferner erkläre ich, dass ich die vorliegende Arbeit selbst und ohne unzulässige Hilfe Dritter angefertigt habe. Alle von mir benutzten Hilfsmittel, persönliche Mitteilungen und Quellen sind in der Arbeit angegeben. Insbesondere habe ich hierfür nicht die Hilfe eines Promotionsberaters in Anspruch genommen und Dritte haben weder unmittelbar noch mittelbar geldwerte Leistungen von mir für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen.

Die Arbeit wurde weder im In- noch Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde vorgelegt. Weder früher noch gegenwärtig habe ich an einer anderen Hochschule eine Dissertation eingereicht.

Ich versichere, dass ich nach bestem Wissen die reine Wahrheit gesagt und nichts verschwiegen habe.

Ort, Datum

Unterschrift